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NORTHERN ESSEX COMMUNITY COLLEGE



Advising Copy

Academic CATALOG

2000 - 2001



NORTHERN ESSEX
COMMUNITY COLLEGE
Haverhill • Lawrence





2000-2001

Catalog

Northern Essex Community College



Haverhill Campus at Elliott Street
100 Elliott Street
Haverhill, Massachusetts 01830
Telephone 978 556-3000

Lawrence Campus at Franklin Street
45 Franklin Street
Lawrence, Massachusetts 01841
Telephone 978 738-7000

Lawrence Campus at Amesbury Street
78-82 Amesbury Street
Lawrence, Massachusetts 01841
Telephone 978 738-7600

Accreditation

Northern Essex Community College is accredited by the New England Association of Schools and Colleges, Inc., which accredits schools and colleges in the six New England states. Accreditation by the Association indicates that the institution has been carefully evaluated and found to meet standards agreed upon by qualified educators.

Northern Essex supports the efforts of primary and secondary school officials and governing bodies to have their employees attain proper certification and their schools achieve regional accredited status to provide reliable assurance of the quality of the educational preparation of its applicants for admission.



College Directory

Haverhill Campus at Elliott Street
978 556-3000

Lawrence Campus at Franklin Street:
978 738-7000

Lawrence Campus at Amesbury Street:
978 738-7600

Toll Free: 1-800-NECC-123

e-mail: info@necc.mass.edu
www.necc.mass.edu

ACADEMIC ADVISING CENTER
978 556-3440

ACADEMIC AFFAIRS
978 556-3325

ADMINISTRATIVE SERVICES
978 556-3922

ADMISSIONS
978 556-3600

BURSAR
978 556-3900

CAREER DEVELOPMENT CENTER
978 556-3722

CENTER FOR BUSINESS & INDUSTRY
978 556-3811 — Haverhill Campus
978 738-7468 — Lawrence Campus

COLLEGE LIFE & HEALTHY LIVING
978 556-3643

CONTINUING EDUCATION SERVICES
978 556-3800

COUNSELING
978 556-3790 — Haverhill Campus
978 738-7449 — Lawrence Campus

ENROLLMENT MANAGEMENT
AND STUDENT SERVICES
Vice President's Office
978 556-3625

INSTITUTIONAL ADVANCEMENT
978 556-3857

FINANCIAL AID
978 556-3650

LAWRENCE CAMPUS
Dean's Office
978 738-7401

LEARNING ACCOMMODATIONS CENTER
978 556-3654
978 556-3655 (TTY)

PERSONNEL
978 556-3926

PRESIDENT
978 556-3855

REGISTRAR
978 556-3700

DEAF & HARD OF HEARING SERVICES
978 556-3658
978 556-3673 (TTY)

STUDENT ACTIVITIES & CAMPUS EVENTS
978 556-3731 — Haverhill Campus
978 738-7417 — Lawrence Campus

STUDENT HEALTH SERVICES
978 556-3770 — Haverhill Campus
978 738-7482 — Lawrence Campus

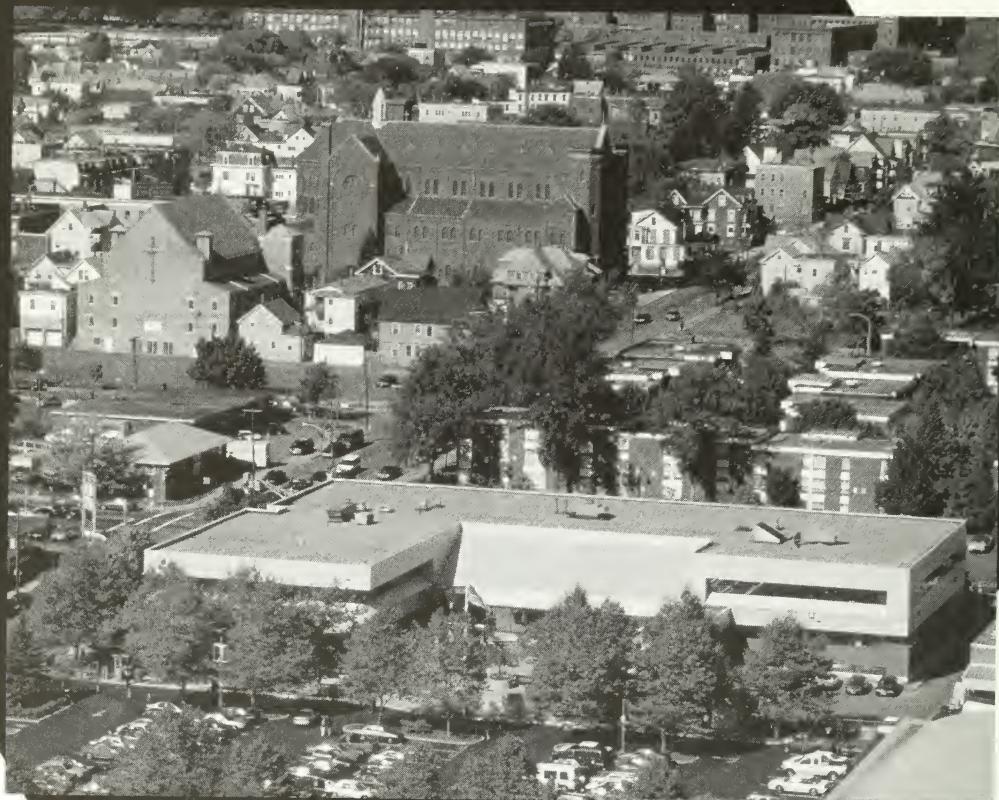


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Northern Essex Community College reserves the right to withdraw or revise any provision or requirement described in the college catalog. Supplements to this document may be issued from time to time to present new or additional information.

The purpose of this publication is to provide information about Northern Essex Community College to persons who work and study at the College, to persons who may be interested in applying for admission, and to parents, teachers, counselors, and the general public. This publication is neither a contract nor an offer to make a contract. While every effort has been made to ensure the accuracy of the information in this publication, the College reserves the right to make changes at any time with respect to course offerings, degree requirements, services provided, cost of attendance or any other subject addressed in this publication. The information in this publication is provided solely for the convenience of the reader, and the College expressly disclaims any liability which may otherwise be incurred.

Welcome by the President



First of all, let me share how pleased I am that you are considering Northern Essex Community College.

At Northern Essex, we put the needs of our students first. We want to be sure that the education students receive is of high quality and that we have the support services in place to help each student succeed.

To achieve this, we carefully monitor our academic programs to ensure they are current and effective. We want to provide the skills students need to reach individual goals whether they include finding a job, transferring successfully, enhancing a current career or personal growth.

Since our students are often balancing work and families with their education, flexible scheduling is also a priority for us. In addition to day courses, the college has evening and Saturday courses as well as on-line and telecourses that allow students to do the majority of their work at home rather than in the classroom. We also offer a choice of convenient locations including our campuses in Haverhill and Lawrence and our extension sites in Andover, Methuen and Newburyport.

Another hallmark of the education students receive at Northern Essex is our support services. Our Reading, Writing, Math and English Language Centers, our Career Development Center and our Advising Center are just a few of the offices available to help our students succeed and make the most of a college education.

I encourage anyone to carefully review this catalog to be familiar with all of the resources available. Enjoy a Northern Essex experience and future success!

Sincerely,

A handwritten signature in cursive script that reads "David F. Hartleb".

David F. Hartleb
President of the College

The College

Northern Essex Community College is justifiably proud of the quality of education and services we offer to our students. Each year over 15,000 individuals study at Northern Essex either full- or part-time. We have a teaching faculty who concentrate their education, experience and effort in the classroom. When your education is completed, you will have the skills needed to join the thousands of Northern Essex graduates who have transferred successfully to baccalaureate programs, or who have become a part of the highly skilled business, industrial and professional work force for which New England is famous.

You will be able to study at Northern Essex at an extremely low cost. *The average full-time student residing in Massachusetts spends approximately \$1000 a semester for tuition and fees excluding insurance.* Part-time study is comparably inexpensive. A number of financial aid sources are available to eligible students and we are committed to helping you find a way to afford Northern Essex.

Northern Essex is a public, two-year college that offers comprehensive programs of study leading to the Associate in Arts degree, the Associate in Science degree and Certificates of program completion. Our student body is a complex group. Many come here directly after high school, often from the top 25% of their class. Others bring a variety of living and job experiences to their studies. The average age of our students ranges from 29 in the day to approximately 31 in the evening.

Some are taking traditional college programs, planning to transfer to a four-year institution after graduation. Some are enrolled in associate degree or certificate programs leading to immediate employment in specialized career fields. Some are taking developmental courses to upgrade their academic backgrounds while pursuing a degree program. Others are taking individual courses, exploring alternatives before making more formal academic decisions. Some students take special interest courses only. Large numbers of students are enrolled in non-traditional programs of study such as English as a second language courses, and certain training programs in special skills and high technology areas are designed to fit the unique training needs of individual groups of students or particular employers.

Excellent facilities, solid academic support services and a dynamic student activity program are part of the educational opportunities available at Northern Essex. Flexible scheduling and the option of completing your degree or certificate at your own pace are hallmarks of a Northern Essex education.

Our dedicated teaching faculty accept with enthusiasm the challenge of responding properly to the differing backgrounds of their students and, at the same time, directing and leading them toward broader understandings. Our faculty are deeply involved in the planning of each class and in the achievement of each student, and are equally dedicated to personal achievement. Our faculty have the teaching time and the commitment to advise as well as instruct students, and to provide support and encouragement as well as specialized study opportunities.

Northern Essex, with its permanent campuses in Haverhill and Lawrence, is an integral part of the local Merrimack Valley community. The rural Haverhill campus borders Kenoza Lake, and is just one minute from Exit 52 off Interstate Route 495. The college's main Lawrence campus is located in the heart of the city less than ten minutes from Exit 41 off Route 495 or Exit 46 off Route 93 at 45 Franklin Street. A broad range of academic programs, non-credit offerings and support services are available at this site. It also houses the college's paralegal studies, criminal justice and health programs, including registered and licensed practical nursing, radiologic technology, respiratory care, medical assisting and dental assisting programs. A second Lawrence campus is located just a short walk away on Amesbury Street. Extension sites are located in Andover, Methuen, Newburyport and at Whittier Regional Vocational Technical School. Our multiple locations allow for easy commuting, minimum disturbance of home and job schedules, and avoidance of expensive dormitory and food plan costs. We are in close touch with what is going on in the Merrimack Valley—we are in touch with the kinds of academic programs people want to study, the skills training the community needs and where career opportunities for our graduates are located.

The Mission of the Public Higher Education System

The public college and university system in the Commonwealth of Massachusetts is comprised of 15 community colleges, nine state colleges, and five campuses of the University of Massachusetts. The system exists to provide accessible, affordable, relevant and rigorous programs that adapt to meet changing individual and societal needs for education and employment. The public system is committed to continuous improvement and accountability in all aspects of teaching and learning. The Board of Higher Education, together with each respective Board of Trustees, expects all students, faculty and staff to be held to exacting standards in the performance of their roles and responsibilities.

Massachusetts Public Higher Education is a system with a distinguished past, increasing pride, and unlimited potential.

Massachusetts Community College Mission Statement

The Fifteen Massachusetts community colleges offer open access to high quality, affordable academic programs, including associate degree and certificate programs. They are committed to excellence in teaching and learning and provide academic preparation for transfer to four-year institutions, career preparation for entry into high demand occupational fields, developmental coursework and lifelong learning opportunities.

Community colleges have a special responsibility for workforce development and through partnerships with business and industry, provide job training, retraining, certification, and skills improvement. In addition, they assume primary responsibility, in the public system, for offering developmental courses, programs and other educational services for individuals who seek to develop the skills needed to pursue college-level study or enter the workforce.

Rooted in their communities, the colleges serve as community leaders, identifying opportunities and solutions to community problems and contributing to the region's intellectual, cultural and economic development. They collaborate with elementary and secondary education and work to ensure a smooth transition from secondary to postsecondary education. Through partnerships with baccalaureate institutions, they help to promote an efficient system of public higher education.

The community colleges offer an environment where the ideas and contributions of all students are respected. Academic and personal support services are provided to ensure that all students have an opportunity to achieve academic and career success. No eligible student shall be deprived of the opportunity for a community college education in Massachusetts because of an inability to pay tuition and fees.

Approved: June 15, 1999
Board of Higher Education

Northern Essex Community College Mission of the College

The mission of Northern Essex Community College is to serve the people of the Greater Merrimack Valley as a caring and comprehensive center of educational excellence that offers high quality, affordable adult and postsecondary education through the Associate Degree level, as well as a broad range of occupational programs and community services which enhance the social, cultural and economic life of the region.

Northern Essex Community College Core Values Statement

1. A commitment to student success provided by a dedicated, professional faculty, staff and administration knowledgeable in current developments in their respective fields.
2. A commitment to effective instruction and high academic standards encouraging active engagement by students in their own learning and achievement.
3. A commitment to provide high quality instruction in the following areas: developmental education, liberal arts education, special interest/enrichment education, and technical and career education.
4. A commitment to provide educational access to a diverse student body with essential specialized student support services.
5. A commitment by faculty, staff, administration and students to grow and work together in a cooperative environment of shared governance, open communication, fairness and mutual respect.
6. A commitment to anticipate, seek out and address the educational, cultural and economic needs of various constituencies in the Merrimack Valley.

Northern Essex Community College 1998-2003 College Priorities

Student Success: Create a learning centered environment where student success is paramount and is supported by an effective range of academic and student support services.

Curriculum: Strengthen academic programs through enhanced professional development, proactive communication with external constituents, the institution of an honors program and increasing the number of full-time faculty.

Developmental Education: Strengthen our developmental program so that students who complete developmental requirements perform as well in college level courses as students who did not require developmental instruction.

Enrollment: Raise our enrollment to 3600 FTE over five years.

Economic & Workforce Development: Play a key role in economic/workforce development in the region by increasing business and industry workforce development and training by approximately 30% over the next 5 years.

Technology: Use technology as an essential tool, which will allow NECC to provide a comprehensive and quality education to its students and perform its administrative functions with greater effectiveness.

Culture & Climate: Improve our climate and culture.

Alternative Funding: Seek additional non-tuition/base budget resources and revenues to support the college mission so that by the year 2003, a significant percentage of the institution's budget will be derived from these sources.

Northern Essex Community College Presidential Priorities

1. To create a learning centered environment where student success is paramount by building on the achievements of the Center for Instructional Technology and the new Center for Teaching and Learning.

2. To use technology as an essential tool to distinguish the college and to facilitate the innovations and creativity necessary to create our learning centered environment.

3. To play a key role in economic development by becoming a major force in workforce development in the Lower Merrimack Valley region and to promote our role through an expansion of the Center for Business and Industry.

Admission

We encourage everyone to consider attending Northern Essex Community College. People have thought of a college as an educational resource for recent high school graduates. Northern Essex is this and much more.

- Students may enroll in a transfer program and continue their study at a four-year college after earning an associate degree. This allows completion of part of a student's education at a relatively low cost. Students enjoy the benefits of a faculty dedicated solely to teaching; not one whose primary emphasis is research.
- Students may enroll in an associate degree program leading to a job and career after graduation.
- Students may choose one of the career-oriented certificate programs to develop or upgrade a skill as quickly as possible.
- Students may study on a full- or part-time basis, days or evenings, and may begin in the fall, spring or summer.
- Students may complete their high school equivalency (GED) at Northern Essex.

Getting to Know Northern Essex

We encourage prospective students to visit the campus and to speak with our students and graduates. Satisfied students and alumni are our best endorsement. Campus tours are available. Please call the Office of Admission at 978 556-3600 to sign up. Our staff members are ready to answer questions or refer prospective students to someone who will assist in making initial education decisions.

Application for Admission

Northern Essex Community College accepts without discrimination all applicants meeting the admission standards for an associate degree, certificate or other academic program. Some programs require specific academic prerequisites for admission, others have enrollment limits. Please refer to the section on admissions standards, factors in admissions, and the program requirements listed in the catalog for more details. Applicants must be high school graduates or the equivalent, or meet ability-to-benefit guidelines.

Programs have different application timelines, information about current timelines by program is available in the Office of Admission.

Obtain an application form and return the completed form to the Office of Admission and request your high school and any college attended to forward an official transcript of grades to the Office of Admission. Applications cannot be acted upon until they are complete.

Joint Admissions Programs

Northern Essex Community College participates in Joint Admissions Programs with the University of Massachusetts undergraduate campuses and most of the Massachusetts state colleges. This program allows participating students guaranteed admission to the institution of their choice, provided they graduate from NECC in an approved associate degree program and with a minimum cumulative grade point average of 2.5. Participating students receive academic advising and support from the Academic Advising Center throughout their career with NECC.

It is highly recommended (for proper advising) that students interested in participating in Joint Admissions submit a participation form through the Office of Admission. It is recommended that the form be submitted prior to completing 30 credits. During their final semester at NECC, before graduation, students must also complete the Intent to Enroll form for the institution they plan to attend. As participants in Joint Admission, they are not required to fill out an application form for that institution, nor do they have to pay an application fee.

Tuition Advantage Program for the Commonwealth of Massachusetts Joint Admission Program

Through the Commonwealths Tuition Advantage Program, participants who graduate from NECC with a minimum cumulative GPA of 3.0 will receive a 33% reduction on in-state tuition for up to two years, after they transfer to their Joint Admission school of choice. In order to continue to receive the tuition reduction the student must maintain a minimum GPA of 3.0 at the four-year institution.

Admission Standards

Standards for admission to academic programs at Northern Essex Community College are stated in this college catalog. The college reserves the right to determine the number of students to be enrolled in each program of instruction, and to utilize professional judgment in making admissions decisions.

Factors in Admission

The following may be considered in making admissions decisions:

The applicant's ability to benefit from the program; the availability of seats in the applicant's chosen program; the distance from the applicant's place of residence to the college; or the applicant's potential access to other postsecondary education opportunities. The college reserves the right to invoke a geographical preference factor for admission to a program when it is deemed necessary. This factor may be taken into consideration with other factors to determine a program admissions decision. When invoked for a program, the geographical preference order is:

- applicants from the college's primary service area;
- applicants from the college's secondary service area;
- applicants from Massachusetts, but outside these two areas;
- applicants who are eligible for the Regional Student Program (RSP) of the New England Board of Higher Education;

- applicants from out of state; and applicants who would qualify as foreign students if accepted; that is, on F-1 status.

Contact the Office of Admission for information about programs which currently have a geographical preference factor in effect.

Applicants with Disabilities

The information below applies to students entering credit AND non credit courses.

Northern Essex Community College adheres to all non-discrimination laws. The College's policy regarding admissions and equal access to education prohibits discrimination on the basis of a disability. Applicants with disabilities are eligible for admission if they meet the academic requisites and technical requirements for admissions with or without reasonable modifications to rules, policies, practices, or the provision of reasonable accommodations and services (Section 504 of 1973 Rehabilitation Act).

It is the applicant's decision to identify as having a disability. It is voluntary. Applicants with a diagnosed disability seeking services during assessment testing, credit and non credit classroom learning, and testing are required to submit comprehensive documentation to verify eligibility under Section 504 and the Americans with Disabilities Act, (ADA). Eligibility for services is based upon a documented disability that substantially limits some major life activity, including learning.

Applicants choosing to forward documentation to the Admissions Office need to be aware that it is forwarded to Specialized Student Services. Approving and setting up ongoing services is a time consuming process. We encourage early requests for services before and throughout the semester.

Applicants are invited to contact the following offices for documentation guidelines, eligibility criteria, faculty/student rights and responsibilities, and service information.

Services for Learning Disabilities, Brain Injury, Physical Disabilities, Attention Deficit/Hyperactivity Disorders, contact:

Learning Accommodations Center
Voice: 978-556-3654 (TTY: 978-556-3655)
Fax: 978-556-3740 (Email: lacenter@necc.mass.edu)
Northern Essex Community College
Student Center Building, F113
100 Elliott Street, Haverhill, MA 01830

Services for Psychiatric/Neurobiological Disabilities, contact:

Supported Education Services
Voice: 978-556-3674 (TTY: 978-556-3793)
Northern Essex Community College
Student Center Building, F105,
100 Elliott Street, Haverhill, MA 01830

Services for students who are Deaf or hard of hearing contact:

Deaf and Hard of Hearing Services,
Voice: 978-556-3658 (TTY: 978-556-3673)
Northern Essex Community College,
Student Center Building, F131
100 Elliott Street, Haverhill, MA 01830

International Students

Northern Essex Community College welcomes international students each year. International students, whose native language is other than English, will be required to take a TOEFL in their country or the regular test at the Assessment Center at the Haverhill campus. The minimum of 500 on paper-based and 173 on computer-based TOEFL scores is required for admission. On the College's assessment you must receive a placement above. Prospective applicants should request an International Student Application Packet from the Office of Admission.

Transfer Credit

Transfer credit may be awarded for a course earned with a grade of C or better at another accredited institution when the course is equivalent to one offered by the college and applies to the Northern Essex curriculum in which the student is enrolled. Grades given for transferred courses are not computed in the quality point average at Northern Essex Community College.

Credit may be granted for courses which have previously been counted toward a degree that an individual has been granted (whether baccalaureate or associate degree) provided the courses previously taken apply to the Northern Essex curriculum in which the student is currently enrolled.

An **official** transcript from the previous college is required. Students will be notified by mail from the Registrar's Office of the transfer credits awarded.

Advanced Placement

Students who take Advanced Placement courses and an Advanced Placement Test of the College Board in secondary school may be awarded advanced placement and credit at the college. Credit is granted on the basis of a three or higher score on the Advanced Placement Test.

Readmission to the College

Students who discontinue enrollment at Northern Essex may have to apply for readmission. Some academic departments have specific policies governing readmission.

Cooperative Ventures with Area Secondary Schools

Northern Essex Community College has entered into a number of articulation agreements with regional vocational schools and comprehensive high schools to grant college credits and advanced placement for superlative students who have completed advanced course work in areas such as electronics, drafting, computer and information sciences, business, health technology, math and science. This effort is ongoing, and more schools and programs are expected to be added in the future. To date, agreements have been signed with the following schools:

Amesbury High School

Georgetown Middle High School

Greater Lawrence Technical School

Greater Lowell Regional Vocational Technical School

Haverhill High School

Lawrence High School

Lynn Vocational & Technical Institute

Masconomet Regional High School

Methuen High School

Northeast Metropolitan Regional

Vocational Technical High School

Peabody Veterans Memorial & Vocational High School

Salem High School, Salem, MA

Shawsheen Valley Regional Vocational Technical School

Triton Regional High School

Whittier Regional Vocational Technical High School

Winnacunnet High School

For more information, contact the guidance counselor or appropriate department head at the secondary school or the Office of Academic Affairs at NECC.

For Further Information

All inquiries, requests for forms or other material, or questions pertaining to application, admission and matriculation should be sent to the Office of Admission, Northern Essex Community College, 100 Elliott Street, Haverhill, MA 01830-2397, or call 978 556-3600.

All inquiries, requests for forms or questions pertaining to registration should be sent to the Registrar's Office, Northern Essex Community College, 100 Elliott Street, Haverhill, MA 01830-2397 or call 978 556-3700.

Tuition and Fees

Mandatory tuition rates for Northern Essex Community College are established by the Board of Higher Education of the Commonwealth of Massachusetts. The Northern Essex Community College Board of Trustees authorizes discretionary fee schedules for the college. Changes in both tuition and fees may occur in future semesters and other unique fees may be charged.

With the exception of specific programs or courses, such as the Evening Nursing courses, all credit courses, regardless of meeting time, are charged the same cost per credit, based on the student's legal residence.

| | |
|--|----------|
| MASSACHUSETTS RESIDENT | |
| (Tuition Portion: \$28 per credit hour) | \$74.00 |
| Non-Resident Qualifying for the New England Regional Student Program | |
| (Tuition Portion: \$42 per credit hour) | \$91.00 |
| Non-Resident and Foreign Student (F-1 Visa) | |
| (Tuition Portion: \$230 per credit hour) | \$279.00 |
| Nursing Courses (Non-State Supported) only | |
| Massachusetts Resident—Per credit hour | \$138.00 |
| Non-Resident—Per credit hour | \$184.00 |

NON-CREDIT (SPECIAL INTEREST) COURSES

Tuition for these courses varies, depending upon length of course; materials fees may be required.

ADDITIONAL FEES THAT MAY APPLY

| | |
|--|----------|
| Mandatory Health Insurance— | |
| Academic year 9/1/99 through 8/31/00 | \$495.00 |
| Malpractice Insurance Fee— | |
| For courses requiring this coverage | \$14.50 |
| Testing Fees— Charged to a limited number of allied health courses | variable |
| Graduation Fee— | variable |
| Transcript Fee— Per copy | \$1.00 |
| Bad Check Fee— Per bad check | \$10.00 |
| MASSPIRG— Per semester (optional fee) | \$7.00 |

A description of MASSPIRG can be found on page 15.

Refund Policy

Due to recent changes in administration as well as the installation of a new computer system, the College will adopt a date-driven refund policy. These refund dates will be published in the academic calendar.

Financial Aid Refund Policy

For financial aid recipients the refund policy is applied according to current federal regulations. For further information contact the Financial Aid office.

Residency and Tuition

Students must be legal residents of Massachusetts to be eligible for the in-state (resident) tuition rate. Non-residents pay a non-resident tuition rate set by the Board of Higher Education. In general, one is considered a Massachusetts resident if one has been in continuous residence in Massachusetts for six months immediately prior to the beginning of an NECC academic term. Foreign students are not eligible to be Massachusetts residents. For more information about residency, contact the Office of Admission at 978 556-3600. For more information about tuition and fees, contact the Bursar at 978 556-3895.

New England Regional Student Program

Prospective students may be eligible for participation in the New England Regional Student Program (RSP) if a program of study is not offered in their home state; if Northern Essex Community College is closer to their legal residence than their home state institution; and if the program of study is open under the RSP. Students must be legal residents of a New England state, qualify for, and be accepted through, the Regional Student Program (RSP) of the New England Board of Higher Education to be eligible for the NERSP rate. For more information about the New England Regional Student Program, contact the Office of Admission.

Mandatory Health Insurance

The Massachusetts Mandatory Health Insurance Law requires that all students carrying nine credits or more must participate in the Massachusetts Regional Community Colleges' Student Accident and Sickness Insurance Plan or in a health insurance program with comparable coverage. Students who have comparable coverage may waive this fee.

Financial Aid Tuition Waiver Awards

Tuition Waivers, awarded by the Financial Aid Office to Massachusetts residents only, may be used to defray tuition costs at the current rate of \$28.00 per credit, subject to change.

Massachusetts National Guard

Tuition Waivers

Members in good standing of the active Massachusetts Army or Air National Guard, are eligible for tuition waivers in accordance with Chapter 15A and Chapter 33 of the Massachusetts General Laws. This tuition waiver may be used to pay for state-supported courses only, at the current rate of \$28.00 per credit, subject to change.

Veterans Tuition Waivers

Veterans Tuition Waivers may be used to defray tuition costs at the current rate of \$28.00 per credit, subject to change. Check with the Veterans' Benefits Coordinator in the Financial Aid Office to determine eligibility for this program.

Massachusetts Rehabilitation Commission

Commission for the Blind

Tuition Waivers

The Board of Higher Education's Tuition Waiver Program Guidelines has been extended to include eligible clients of the Massachusetts Rehabilitation Commission and Commission for the Blind. This tuition waiver may be used to defray tuition costs at the current rate of \$28.00 per credit. See the Financial Aid Office for details.

Gold Card/Senior Citizens Waivers

Any Massachusetts resident aged 60 or older may take courses, both credit and non-credit, on a seat-available basis. The current credit course discount is \$28.00 per credit. All other fees for both credit and non-credit courses must be paid. Some non-credit courses are not eligible for tuition waivers.

Commonwealth of Massachusetts Employee Tuition Remissions

Tuition Remission (Exemption) benefits offered to certain state employees and their dependents are applicable in the state-supported (Day Division) courses at the rate of \$28.00 per credit and in non-state supported (Continuing Education Services) courses at the rate of \$14.00 per credit. These rates are subject to change.

Installment Plan

Northern Essex Community College offers the Academic Management Services plan (A.M.S.) for those students who might prefer to budget their college expenses in the Fall and Spring semesters, at a non-refundable cost of \$30.00 per semester. There are no other interest or fee charges.

Third Party Payment

Students whose accounts will be paid in full or in part by a third party provider such as Massachusetts Department of Rehabilitation, private scholarship, employee tuition plan, etc. must submit proof of unconditional payment guarantee.

MASSPIRG

MASSPIRG (Massachusetts Student Public Interest Research Group) is a non-profit environmental and consumer organization directed solely by students. MASSPIRG was founded in 1972 and now has chapters on twenty-eight campuses throughout Massachusetts. Students at Northern Essex voted to establish a MASSPIRG chapter in the fall of 1990. Some of MASSPIRG's more recent accomplishments include passage of the Massachusetts Clean Air Act, passage of legislation requiring reduced use of toxic substances, and enactment of new and used car lemon laws. MASSPIRG is able to do this work because students have voted to fund the organization through a waivable fee on their tuition bill.

Audit of Classes

The cost to audit credit courses is the same rate as listed under Tuition and Fees. To audit a course, obtain a Permission to Audit form at the Registrar's Office.

Charge-A-Course

(MasterCard/VISA/Discover)

Students may charge tuition and fees for courses taken at Northern Essex Community College.

Non-Payment Policy

It is the policy of the Board of Higher Education that students or former students who are listed by the Bursar's Office as having unpaid debts for tuition or other college-related charges, where said debts have not been discharged by operation of law or where deferred payment of said debts has not been agreed to by said college will not (1) be issued any diploma to which said students might otherwise be entitled; (2) be permitted to register for any program at any state college for which said students might otherwise be eligible; and (3) be furnished a certified copy of any state college transcript, although said students will be entitled, upon written request, to inspect and review uncertified copies of their transcripts.

Withdrawal from College

Matriculated students who have been accepted to a college program and must discontinue their studies, must officially withdraw in writing, by completing a Withdrawal from College form. Forms are available in the Office of Admission and the Registrar's office.



Financial Aid

The function of the Office of Financial Aid is to provide information about student financial assistance programs for those students who would otherwise be unable to attend college because of economic limitations. Based on an individual's financial need, the Office of Financial Aid allocates funds to assist eligible students in paying for the cost of their college education. Assistance is provided through several sources and a student may receive a combination of more than one type of aid. The amount and type of financial aid a student receives is subject to the allocation levels of the various aid programs and is governed by federal, state and college regulations. A student must be enrolled in a degree or certificate program in order to receive financial aid.

Applying for Financial Aid

To apply for all financial aid funds awarded by NECC, a student must submit a Free Application for Federal Student Aid (FAFSA), a Financial Aid Verification Worksheet, and all appropriate income verification documentation. Applications are available year-round; however, due to limited funding, students are urged to apply early. Applications filed prior to April 24 for the Fall semester will receive priority. Students applying for aid for the first time for the Spring semester should complete the application process prior to November 1.

How Need is Determined

Financial Aid is awarded on the basis of financial need. Financial need is the difference between the estimated cost of attendance and the calculated amount the student and family can reasonably be expected to provide based on the FAFSA. The estimated cost of attendance includes tuition, fees, books, room and board, transportation, supplies, and personal expenses. The student and family contribution is affected by taxable and untaxed income, assets, number of dependents, number in the household, the number of family members in college and other necessary or unusual expenses.

Eligibility

In order to be eligible a student must meet all of the following criteria:

1. demonstrate financial need;
2. maintain satisfactory academic and financial aid progress;
3. be enrolled in a degree or certificate program;
4. be enrolled on at least a half time basis (6 credits) if applying for a student loan, and at least 3 credits for a Pell Grant, depending on financial need;
5. be a U.S. citizen or eligible noncitizen;
6. not owe a refund on a Federal Pell Grant or be in default on a Federal Perkins Loan (formerly NDSL), Federal Stafford Loan (formerly GSL), Parent Loan for Undergraduate Students (PLUS) or Supplemental Loan for Independent Students;
7. have a valid social security number;
8. have a high school diploma or a General Education Development (GED) certificate or must pass an independently administered test and have the ability to benefit (see Admissions);
9. be registered with the Selective Service, if required.

Financial Aid Award Package

An award package may be a combination of any of the following aid programs. A Free Application for Federal Student Aid (FAFSA) must be completed to receive consideration for these awards. Priority is given to those students who file on or before April 24. Student's who have a BA or higher may only receive loans or work study.

Federal Pell Grant

A program funded by the federal government. Once an applicant has completed the application process, a Student Aid Report (SAR) will be sent directly to the applicant. The award amount will be based on the student's enrollment status and the calculated family contribution. All pages of the SAR must be sent to the Office of Financial Aid before an applicant can receive a grant.

Massachusetts Need Based

Tuition Waiver Program

The tuition waiver award is made to students with financial need. This award will waive the tuition charge up to the amount awarded. Financial need is determined by the Office of Financial Aid using the federally approved needs analysis system. Students receiving this award may be limited to tuition waivers for state-supported classes. Recipients must be Massachusetts residents.

Massachusetts Cash Grant Program

A program funded by the state. This award is made to students with financial need based on the federal analysis system. Recipients must be Massachusetts residents.

Federal Supplemental Educational

Opportunity Grant

A grant for students who would be unable to attend school without this aid. This award is limited to undergraduate students receiving Pell Grants. Students with a bachelor's degree are not eligible for this aid.

Massachusetts State Scholarship

Awarded to needy students who are Massachusetts residents. The priority filing date is May 1st. This program is administered by the Board of Higher Education and utilizes the FAFSA as the application form.

Federal Work-Study

Provides an opportunity for students to work on or off campus. Funds are awarded to students with the greatest need. Students are paid every two weeks for the hours they have worked.

Federal Stafford Loan Program

A low-interest, long-term loan available through participating banks. The variable interest charge for new borrowers will be paid to the bank by the federal government while students are in school and during a six-month grace period after leaving school. This loan is based on financial need. An unsubsidized Federal Stafford Loan is available to students who do not demonstrate financial need.

Federal Unsubsidized Stafford Loan

A federally guaranteed loan available to "independent" students to help meet costs of education. Some banks will allow the deferment (capitalization) of the interest and principal during enrollment periods.

Federal Parent Loan Program

A federally guaranteed loan available to parents of "dependent" students to help meet the costs of education.

Satisfactory Academic Progress

The United States Department of Education has established regulations regarding satisfactory academic progress for use in the awarding of student financial assistance. These regulations provide parameters for institutions to use in establishing their specific standards of satisfactory progress for purposes of awarding student financial assistance (Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Work Study, Federal Stafford/PLUS Loan, State Student Incentive Grant Programs, and other financial aid programs offered by the college). Students who are not making satisfactory academic progress are prohibited from receiving financial aid. A complete copy of the Northern Essex Community College criteria for determining satisfactory academic progress is available in the Financial Aid Office.

Additional Scholarship Sources

In addition to the need based aid programs administered by the Office of Financial Aid, NECC students may wish to apply to one or more of the following scholarship programs. Application information is available in early Spring.

NECC Faculty Association Scholarship

For returning and graduating students with a 3.00 grade point average or greater.

NECC Foundation Scholarship

Scholarships are awarded to students with a 3.5 grade point average or greater.

NECC Alumni Association

A \$500 scholarship award is made to one or more NECC students each year.

The NECC Administrators' Association

Scholarship

Two \$300 scholarships are awarded annually to students who have completed 24 credits with a minimum 3.0 QPA.

The NECC Staff Association Scholarship

A \$500 and two \$250 scholarships for a transferring student who has completed at least 48 credits with a 3.0 grade point average or greater.

Alumni Overseas Academic Program Scholarship

An annual award of \$250 to a student who will be enrolling in the Overseas Academic Program. The recipient must have a grade point average of 3.0 and have completed at least 30 credits.

The James P. "Jake" Rurak Memorial Scholarship

A scholarship to honor the memory of James P. Rurak, his efforts as a State Senator in establishing Northern Essex Community College, and his contributions to the people of the Commonwealth of Massachusetts. Established for students interested in a career in community or public service.

The Francis J. Bevilacqua Scholarship

A scholarship in honor of Francis J. Bevilacqua who spent so much of his life serving the public. Awarded to current NECC students with a 3.0 grade point average who are residents of Haverhill and who have demonstrated involvement in, or preparing for careers in, public service.

Massachusetts National Guard

Tuition Waiver Program

National Guard waiver of tuition is available to those who are in a Massachusetts National Guard Unit. This waiver is applied only to the tuition portion of the bill, up to 15 credits; however, all fees must be paid. If you have any questions, contact the Veterans Affairs representative in the Financial Aid Office at 978 556-3769, or -3737.

Soroptimist Foundation Scholarships

This award is to promote upward mobility in mature women who would like to enter college after being out of the work force for a number of years.

Dental Assistant Scholarships

The Milton J. Myers

Memorial Dental Scholarship

The Dr. Bill Gemmell

Memorial Dental Scholarship

The Merrimack Valley

Dental Society Scholarship

The three Dental Assistant Scholarships are to provide funds for Northern Essex Community College students interested in the dental profession who would not otherwise be able to afford a college education. Each of the three scholarships of \$400 will be awarded annually.

The Louis A. Gigliotti Memorial Scholarship

(\$200) is awarded to students with disabilities in the memory of Lou Gigliotti, a student at Northern Essex.

The Raney Family Memorial Scholarship

(\$200) is awarded in the memory of Margaret Raney, a former member of Northern Essex faculty and her son, Joseph.

Adonica Kelleher Memorial Scholarship

This scholarship is awarded to a disabled student from the Amesbury/Newburyport area who is majoring in Business. The award criteria is based on prior academic achievement. The award is for \$200 a year (\$100 a semester). Applications are available in early April.

Veterans and Service Persons Club Scholarship

Awards for each academic year are ten \$100 scholarships for students (day or evening) who are "service connected", demonstrate financial need, earned 12 college credits in good standing and received a recommendation from a faculty member or Veterans and Servicepersons Club member.

The Future Educators Scholarship

A scholarship of \$100 is awarded to encourage and support students in pursuing a career in teaching. The recipient has completed a minimum of 24 credits, has a 3.0 cumulative grade point average in all college level courses.

The President Emeritus Harold Bentley

Memorial Scholarship

This award for \$500 is presented annually to a Northern Essex Community College student who demonstrates excellence in oral communication skills. The purpose of the President Emeritus Harold Bentley Memorial Scholarship is to honor the character and values of President Emeritus Harold Bentley.

The John H. Spurk Memorial Scholarship Award

This award for \$500 is presented annually to a matriculated student in the Liberal Arts program, who has completed 12 or more credits, is a resident of the Merrimack Valley, and has earned a grade point average of 3.2 or better. The John H. Spurk Memorial Scholarship Fund is established in honor of Dr. Spurk, Professor of History and Government at Northern Essex since 1967, who passed away in December, 1991.

The Noela and Dennis Murphy

Nursing Scholarship

This award is equivalent to the amount of the tuition and fees for Nursing III. It is offered to day nursing students entering Nursing III who demonstrate clinical expertise, compassion and caring that serves as a continuing reminder of the ideals and sensitivity displayed by Dennis and Noela Murphy.

The Friends of NECC Scholarship

Scholarships are awarded on a funds available basis (\$100 or more). Awards are to be applied toward tuition and fees or books. These scholarships are to be awarded to a returning student who has proven academic excellence (minimum 3.0 QPA) and distinctive contributions to NECC and the community.

The LPN Class Scholarship

\$250 is awarded to two students entering the final semester of the program who demonstrate financial need and have achieved a 2.5 QPA or better by the end of the spring semester.

The NECC Science and Technology

Club Scholarship

An annual award of \$100 is offered to a student enrolled in a science or technology program who has completed between 24 and 40 credits with a 2.7 QPA or better.

Veterans and Active Duty Service Persons

Students who are veterans, active reservists, on active duty with the National Guard or eligible dependents of a veteran may be eligible for educational benefits through one of the programs summarized below:

Federal GI Benefits: Monthly allotment to eligible veterans who entered the service after July 1, 1985.

Chapter 106 GI Benefits: Monthly allotment to eligible Active Duty National Guard or Active Duty Reservist who entered the guard or reserves after July 1, 1985 with a six year obligation.

State Tuition Exemption Program: A benefit available to certain categories of Veterans who served during a conflict and have resided in Massachusetts for at least one year immediately prior to going to school.

National Guard Tuition Exemption Program: Eligible members of a Massachusetts Guard Unit may be eligible for a tuition waiver of state funded courses.

For more information about veterans services and benefits, contact the Financial Aid office, telephone 978 556-3769, or -3737.

Student Life

The Student Center, the Sport and Fitness Center, and Spurk Building serve as the base for co-curricular activities at Northern Essex.

Co-curricular activities and services in the Student Center include the Student Activities office, Student Senate office, the student newspaper, a lounge area with CTN/TV (College Television Network TV), a student theater for viewing films and movies, the cafeteria, and the college bookstore. The cafeteria includes a stage area for small concerts, awards ceremonies and college fairs. Offices providing essential student services include the Counseling Center, the Learning Accommodations Center, Deaf and Hard of Hearing Services, Supported Education, and Student Health Services.

The Sport and Fitness Center houses the College Game Room featuring pool and ping-pong tables, a lounge area and a snack bar; the Campus Recreation program; the intercollegiate athletic program, the Wellness and Fitness Center, and the College dance program (Stillpoint Dancers). Adjacent to the Sport and Fitness Center is an outdoor track, a soccer field, baseball field, softball field, an outdoor basketball court and handball courts. The Athletic Department, the Department of Sport and Leisure Studies, the Little Sprouts Childcare Enrichment Center, and the College Life and Healthy Living Unit office, are all located in the Sport and Fitness Center.

Jitters Cafe and the Top Notch Theater are located in Spurk Building. Cafe entertainment includes performances by comedians, folk artists and jazz singers. The Top Notch Theater, located on the third floor of the Spurk Building, is home to the Top Notch Players, the College's student theater group.

Student Activities Department

Through involvement in co-curricular activities, students have opportunities to develop leadership skills, new friendships, and become more socially responsible and culturally enriched.

Activities and opportunities available through the Student Activities Department include the Student Government Association, over 25 clubs including academic/social/creative arts clubs, the student newspaper (*Observer*), and the student literary magazine (*Parnassus*).

Other programs available to students include the Student Enrichment Program and the Student Leadership Development Program. For more information on programs and services offered through the Student Activities Department call 978 556-3731.

Student Senate

The Student Senate is the elected body of the Student Government Association (SGA) and is governed by the SGA Constitution and Bylaws. The Student Senate works as a team to promote the rights and act on the concerns of students. Members of the Student Senate participate in national conferences, leadership retreats, seminars and community programs which provide valuable transferable skills. For information on how to become a member of the Student Senate, contact the Student Activities Department at 978 556-3731.

Student Identification Card

Student Identification cards are issued for new students through the Student Activities Department. The Student Identification Card enables students to borrow audio visual equipment, gain admittance to the Sport and Fitness Center facilities, take out intramural/recreation equipment and receive discounts at certain area businesses. To report a lost identification card, contact the Student Activities Department.

Housing

Housing facilities are not provided by or supervised by Northern Essex Community College. The Student Activities Department maintains a list of housing in the immediate college area available to students. Bulletin boards listing housing availability are located opposite room F-135 on the Haverhill campus and opposite room 134 on the Lawrence campus.

Intercollegiate Athletics and Campus Recreation

The intercollegiate athletic programs at NECC combine a rich tradition of success at the state, regional, and national level with a Division III philosophy. The Athletic Department offers women's soccer, women's volleyball, men and women's cross-country, baseball, men and women's basketball, men and women's golf and cheerleading. Club sport programs are developed in accordance with student interest.

The Campus Recreation program offers a variety of competitive and noncompetitive sports, outdoor activities, and Game Room programs. Intramural sports include flag football, indoor soccer, co-ed volleyball, floor hockey, three-on-three basketball and foul shooting contests. Outdoor activities include hiking, rock climbing, mountain biking, cross country skiing, canoeing, and snow tubing. Aerobics classes, bowling, ping-pong and billiards round out the recreational offerings at Northern Essex. For more information on intercollegiate athletics or the Campus Recreation program, contact the Athletic Department at 978 556-3820.

The Wellness and Fitness Center features Eagle Cybex strength training equipment, free weights and cable TV. Cardiovascular equipment includes treadmills, stairclimbers, stationary bicycles, and rowing ergometers. Throughout the academic year the Center offers motivational programs, fitness classes, and wellness workshops. The Coordinator of the Wellness and Fitness Center is available for one-on-one exercise consultations by appointment. For more information on the Wellness and Fitness Center call 978 556-3819.



Child Care Service

IN HAVERHILL

Professional child care services are available on the Haverhill campus at Little Sprouts Child Enrichment Center located in the Sport and Fitness Center. From the indoor space which promotes discovery and learning to the custom-designed outdoor playground, the Center is an ideal environment for children. The Center offers full day care, 6:00 a.m. to 6:00 p.m. for children from four weeks of age through age nine. Full, part-time and flexible childcare hours are arranged to meet individual needs. Tuition assistance is also available to those eligible for the state-funded voucher program to student parents who meet financial assistance eligibility guidelines, and through the Max Feigenbaum Scholarship Fund. For more information, call 978 556-6133.

IN LAWRENCE

Regular and drop in child care is available at the Campus Learning Center located at the Lawrence Campus. The Campus Learning Center offers quality child care during daytime hours in a facility specially designed for children.

Care is available Monday through Friday mornings from 7:00 a.m. to 5:00 p.m., for children ages 2 years and 9 months to 6 years old. Tuition assistance is available for those demonstrating financial need. For more information, contact the Director at 978 689-9980.

Other Resources and Referrals

Childcare Circuit: Provides referrals to openings in licensed childcare centers in the Merrimack Valley and helps parents locate and evaluate suitable services. There is a nominal fee, but you may qualify for a waiver. Information can be obtained at the Childcare Circuit, 190 Hampshire Street, Lawrence, MA 01840, telephone (978) 686-4288.

Family Day Care: Information about services and programs can be obtained by calling the Greater Haverhill Family Day Care Associates local volunteer referral service coordinators at 978 372-8141.

Tuition Assistance: Available to those eligible for the Day Care Voucher Reimbursement Program. Contact the Childcare Circuit, 190 Hampshire Street, Lawrence, MA 01840, 978 686-4288.

Special Problems: Judith Tye, Coordinator of Early Childhood Education at NECC, is available to help those who have questions or particular problems connected with childcare needs. The Early Childhood office is located in the Spurk Building, Room C-314N, telephone 978 556-3369.

Student Health Services

Student Health Services processes and maintains student medical records related to the Massachusetts College Immunization Law and health requirements for students majoring in Health and Human Service programs. All full-time students (12 credits or more) are required to be in compliance with the Massachusetts College Immunization Law before enrolling at the college. Health and Human Services program majors must be in compliance with specific program requirements before enrolling. For further information see the Policies Section page 157.

NECC Student Health Services also works to promote healthy behaviors and lifestyles through health education programs and services. Weekly outreach tables provide health education, health screenings, and referrals to community health care agencies, testing sites, and clinics. Special emphasis is given to substance abuse and HIV education and prevention.

Student Health Services offers immunizations, cholesterol screenings, seasonal flu shots, American Heart Association CPR classes and Complementary Health Services (commonly referred to as alternative or holistic therapies). First aid and emergency care are provided to the campus community and over-the-counter medicines for colds, headaches, and upset stomach are available for a nominal fee.

For more information contact Student Health Services at 978-556-3770.

Specialized Student Services

Counseling Center

Counselors help develop and support students' abilities to succeed academically and personally. Supportive counseling is provided in times of crisis, and for personal growth and development.

Individual counseling is available on a walk-in basis, or appointments may be scheduled. Group counseling is also offered. Call for details 978 556-3790 (voice) or 978 556-3659 (tty). The standard practice is short-term counseling and referral to community agencies and organizations.

Information shared in counseling sessions is kept in confidence, consistent with applicable federal and state laws, and with the American Counseling Association Code of Ethics and Standard of Practice.

Deaf and Hard of Hearing Services

The following are among the services available:

- interpreting/CART services;
- notetaking services;
- assistive listening devices;
- academic and personal guidance;
- access advocacy;
- testing accommodations;
- cultural awareness training;
- special events and activities; and
- individualized services as needed.

All Northern Essex interpreters are professionals who are certified by the National Registry of Interpreters for the Deaf, or who have passed a state quality assurance screening. Computer Aided Real Time captioning (CART) and assistive listening devices (FM systems) are provided as necessary. Documentation (e.g. audiogram) and a "Request for services Meeting" are required prior to the delivery of services. Also, students are required to renew services each semester. This applies to all credit and non-credit courses.

Deaf and Hard of Hearing Services maintains a close working relationship with the Learning Accommodations Center at Northern Essex Community College, the

Massachusetts Rehabilitation Commission and the Northeast Independent Living Program in Lawrence which provides independent living skills assistance to students within Northeastern Massachusetts. For services call 978 556-3658 (voice) or 978 556-3673 (tty).

Supported Education

Supported Education is a program of individualized support for otherwise-qualified students who have neurological or psychiatric disabilities. Participants are helped to set and achieve educational goals by a personalized combination of services, including:

- assistance with enrollment procedures and course selection;
- academic and supportive advising;
- coordination with, and referral to, community services;
- academic accommodations;
- social skills refinement; and
- training and support for faculty and staff.

Prospective students are encouraged to contact the program as early as possible prior to planned entrance to NECC. Documentation of disability and an intake interview are required prior to the delivery of services. Call 978 556-3674.



Women's Network

The Women's Network is a place for NECC women students and prospective students, faculty and staff. It is also an information and referral source for support systems and resources available at the college and in the community. Education and support is offered around domestic issues, women's health, and other gender-related issues.

Women considering returning to school may begin at the Network in their process of transition to becoming a NECC student. The "Women Returning to School Program" is specifically designed to provide women with information, support and resources to begin and complete a successful academic program that satisfies their personal and career needs. Call 978 556-3832.

Enrolled students enjoy the Network as a place to connect with other women, and to learn more about what's needed to succeed academically, socially and vocationally.

Learning Accommodations Center

INFORMATION FOR STUDENTS WITH PHYSICAL CHALLENGES, LEARNING DISORDERS AND ATTENTION DEFICIT/ HYPERACTIVITY DISORDER.

Northern Essex Community College is committed to promoting equitable access to its programs, services, and facilities for all students. To this end, the College, through its Learning Accommodations Center, and in partnership with students provides reasonable learning accommodations to eligible students who are physically disabled, have a diagnosed learning disability, attention deficit/hyperactivity disorder, and/or brain injury. The Learning Accommodations Center recommends reasonable accommodations on a case-by-case, semester-by-semester basis for both credit and non-credit courses.

Two federal laws, the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973, mandate that post-secondary institutions provide reasonable accommodations to students who have been determined eligible for disability services. The intent of these laws is to eliminate disadvantages that may be imposed by one or more disabilities within the context of the academic environment.

Reasonable accommodations do not lower academic standards, but rather attempt to provide the same academic opportunities to students with disabilities as their peers. The Learning Accommodations Center (LA Center) at NECC is responsible for advising the College of its responsibilities as mandated by these laws. Also, students are responsible for managing their accommodations in alliance with LA Center.

DISCLOSURE OF DISABILITY

The College prohibits discrimination on the basis of a disability. Students are not required to disclose disability. It is voluntary. Only the students with documented disabilities seeking services and reasonable accommodations are required to disclose and submit documentation.

CONFIDENTIALITY

Documentation and "type" of disability are held in confidence and reviewed by LA Center staff in order to determine eligibility for reasonable accommodations and services. Disability type is released with written authorization by the student on the Center's Request for Services or Semester Contract.

ELIGIBILITY

Eligibility for services is based on comprehensive documentation of disability that substantially limits some major life activity, including learning.

DOCUMENTATION

In order for a student to receive services through the Learning Accommodations Center, documentation is required that identifies and describes one or more specific disabilities. Students with learning disabilities, AD/HD, etc. submit a comprehensive report prepared by a qualified professional which includes the name(s) of the test(s) used to determine the disability, scores, subtest scores, and a clinical summary that includes the diagnosis and DSMIV Code. The report must be signed, dated, and include the credentials of the evaluator. A more detailed description of the specific tests that may be required is available from the Learning Accommodations Center. Students with physical disabilities submit a completed copy of our physician's statement form with ICD9 codes (if applicable). We understand that high school, vocational rehabilitation services, and other resource documentation guidelines may differ

from ours. However, due to the laws governing post-secondary institutions' obligations, without this specific documentation, a student can be refused services. It is also possible that after submitting the required documentation, a student is deemed ineligible for services through the Learning Accommodation Center. Feel free to discuss any concerns you may have about eligibility requirements with LA Center staff, or if you prefer, with the NECC ADA/504 Compliance Officer.

REQUESTING SERVICES

The Learning Accommodations Center provides a wide array of services. These services include:

- * assistive technology and training
- * paraprofessional accommodation assistants
- * classroom and environmental modifications
- * disability-related advising and counseling
- * information and referral
- * mediation
- * faculty and staff information and training
- * workshops and support groups

Students requesting reasonable accommodations for the first time during assessment testing, credit or non credit classroom learning are invited to set up an appointment to request services at the Learning Accommodations Center. This is a time consuming process. We recommend first-time service requests be made 8 weeks prior to assessment testing and the first day of class. Students may request services throughout the semester. Late requests may cause significant delays. Also accommodation planning is needed for non-credit courses.

RENEWING SERVICES

Throughout the academic year, in most cases service renewal requests need to be made at least 8 weeks prior to each semester by completing the Request for Service contract.

Delay in Services may result if the student requests services in an untimely manner. In addition, other delays may occur due to uncontrollable circumstances, e.g., unavailable notetaker.

WEEKLY SERVICES

Active students approved for services, who have completed all necessary steps, are required to give a minimum of 5 working days' notice for classroom and testing accommodations throughout the semester.

OTHER SERVICES

Training/Consultations are available to faculty, staff, students, administrators, community agencies and area high schools.

Emergency Evacuation Assistance may be pre-requested by contacting the Security Office. Students are required to inform the Security Office.

Accessible Parking: contact the Security Office for further information 978 556-3689 Haverhill Campus, 978 738-7499 Lawrence Campus.

Americans with Disabilities Act Coordinator or 504 Compliance Officer (See Affirmative Action, Nondiscrimination and Accessibility section of the College Policies on page 155 for more information).

FOR MORE INFORMATION CONTACT:

Learning Accommodations Center
Voice: 978-556-3654 (TTY: 978-556-3655)
Fax: 978-556-3740 (Email: lacenter@necc.mass.edu)
Director: Roxanne R. Cirelli
Northern Essex Community College
Student Center Building, F113
100 Elliott Street, Haverhill, MA 01830

Workforce Development

Workforce Training

In addition to the more traditional career education and training opportunities offered through various college academic divisions, one of Northern Essex Community College's top priorities is to play a key role in the economic and workforce development of the region it serves. The college's goal is to become the workforce training and development provider of choice. NECC assists area businesses and individuals who need customized training and education through its Center for Business and Industry, Northeast Regional Training Center for State and Municipal Employees, Pre-College & Urban Programs, NECC/HUD Lawrence Business Assistance Center and Small Business Development Center along with much community outreach, collaboration and partnerships.

Center for Business and Industry

For over 20 years, the Center for Business and Industry at Northern Essex Community College has been contributing to the economic and workforce development of the region. CBI helps companies and organizations become healthier and more competitive through highly targeted hands-on training, consulting and related services of the highest quality at affordable prices. Subsequently CBI has gained a reputation for offering *The Perfect Fit in Workforce Training* and has become the Merrimack Valley's preferred provider of customized, results-oriented workforce training.

Northeast Regional Training Center

NECC has been designated the Northeast Regional Training Center for all Massachusetts state and municipal employees by the Commonwealth's Human Resources Division (HRD) and a new state-of-the-art training center has been established on the college's Haverhill campus. The center offers technologically advanced training for public employees and those CBI customers who prefer off-site training.

Lawrence Business Assistance Center

The NECC/HUD Lawrence Business Assistance Center, 78-80 Amesbury Street, Lawrence is made possible through a \$400,000 grant from the United States Department of Housing and Urban Development Hispanic-Serving Institutions Assisting Communities Program. It provides information, technical assistance, education and training to Latino business owners and entrepreneurs. The center will assist Latino microenterprises to develop, maintain and expand their businesses, and help them to market their products and services to the larger economic mainstream.

Small Business Development Center

The Massachusetts Small Business Development Center is a partnership with the U.S. Small Business Administration, the Executive Office of Economic Affairs, U-Mass/Amherst School of Management, Salem State College and Northern Essex that provides one-on-one counseling assistance to small businesses or prospective small businesses free of charge.

Pre-College & Urban Programs

This multicultural area of the college focuses on workforce development through assisting traditional and emerging ethnic populations in overcoming language, financial and other barriers to education. Programs provide basic English remedial classes, adult basic education and readiness for taking the General Equivalency Diploma (GED) exam, job placement as well as innovative programs targeted to help certain populations. In addition, Urban Programs tasks include research on community issues and program effectiveness as well as dissemination of relevant information in various formats including workshops and publications.

Continuing Education

The primary goal of Continuing Education is to help people improve existing skills or learn new ones and grow in understanding and in personal satisfaction.

Non Credit Special Interest Classes

Non-credit special interest classes are offered for self enrichment and skill development and cover a variety of topics including Entrepreneurship, career growth, languages, finance, computers, health, gardening, arts and crafts, music and dance, cooking, and sports and fitness. These courses are offered at the Haverhill and Lawrence campuses, at extension campuses in Andover, Newburyport, Methuen, Whittier Regional Vocational Technical High School in Haverhill and at various off campus sites throughout the Merrimack Valley.

Continuing Education Units

Continuing Education Unit (C.E.U.) credit is available through courses offered to health professionals including nursing, social work and mental health.

On Line Learning

Courses delivered to students in an online interactive format via the Internet. Students are able to read lessons, complete assignments and ask question via the convenience of their home or office. Strongly appeals to students whose busy lives make it inconvenient or impossible to participate on campus.

Cosmetology and Manicuring

Licensing courses for careers in Cosmetology and Manicuring are available through Continuing Education Services.

Older Adults

Life Long Learning provides, throughout each semester, informative lectures, programs, study groups and trips for older adults.

Motorcycle Rider Education

Motorcycle Rider Education, sponsored by the Governor's Highway Safety Bureau and in cooperation with NECC and administered by Ironstone Ventures, LTD. and using the Motorcycle Safety Foundation curriculum, provides the individual, with little or no rider experience, low cost basic riding skills, street strategies, motorcycle control and preparation, and safe rider issues in both classroom discussion and actual practice sessions with program provided motorcycles.

Contract Training

Working with supervisors and training departments of area business and industry Continuing Education Services helps meet immediate needs in courses and training to upgrade workforce skills in many fields from basis computer applications to Certificate and Degree Programs.

Gallaudet University Regional Center

Gallaudet University Regional Center at NECC is an extension of Gallaudet University of Washington D.C. and provides information and continuing education to the Deaf and hard of hearing community, their families and service providers in the Northeast Region of the U.S.

Additional Information

For information on any of the above programs or services please call Continuing Education at 978 556-3800.

Academic Support

Academic Advising

FACULTY ADVISORS

All students who are matriculated (formally enrolled) in an academic program and who are taking at least one class Monday through Friday before 5:00 p.m. are provided with a faculty advisor. The faculty advisor is usually a member of the academic department in which the student is enrolled. They may assist students with such things as: course selection and registration, information regarding careers in their major field, general information about college resources and support services, and transfer assistance. It is the role of the advisor to help students utilize the resources of the college and the community in order to achieve their academic, career and personal goals.

ACADEMIC ADVISING CENTER

The Academic Advising Center exists to provide Saturday, evening, and unclassified students (those students who have not decided or enrolled in an academic program) with academic advising. The Center also supplements the delivery of academic information for new students who have not been assigned an advisor yet, as well as, returning students who need questions answered when their assigned advisor is not available.

The Academic Advising Center provides:

- Information about Academic Programs
- Information about course requirements and electives
- Help with course selection and registration
- Assessment of courses needed to complete academic program
- Transfer information
- Referral to College Support Services

Academic Support Services

Academic Support Services offers a comprehensive network of support services to assist students in developing the skills necessary to succeed in college. The following services and programs are offered on a drop-in basis, through the Academic Support Center, second floor, C building:

Academic Skills Assessment: - The Assessment Center provides all students with mandatory skills assessments in accordance with the requirements of the Mass. Board of Higher education. The computerbased test measures students' skills level in the critical areas of Reading, Math, Writing and English Language skills. The results of the assessment are used to determine initial course placement and will ascertain whether a student is required to enroll in one or more non-credit developmental course or in the English Language Program prior to beginning college level work. The academic skills assessment is **required, prior to registration**, for all students who fit into one or more of the following categories:

- All students enrolling in a Degree or Certificate Program
- All students enrolling in a English Comp or Developmental Reading course
- All students enrolling in any Math course
- All students who have completed six credits

Assessments are by appointment only and are free of charge. Call 978 556-3872 for an appointment or more information.

PACE - Pathways to Academic and Career Excellence - TRIO (federal) funded:

Pace provides a comprehensive network of support and retention services for 250 first generation, low income, and/or academically disadvantaged students. Services include: Mentoring; academic guidance; career development workshops; transfer advising; cultural field trips; advocacy and case management; tutoring in content areas; and supplemental learning assistance in Developmental Reading, Writing, and Math.

College Success Project - McNair (State) Funded:

The College Success Project is implemented in collaboration with the PACE Project to provide retention and support services for an additional 150 students. College Success students are low income, first generation college students. Support services include: Peer Tutoring in content areas, academic guidance, student tracking, career development resources, cultural field trips, case management/advocacy.

VOC. ED - Vocational/Technical Support Services - Funded through the Mass. Dept. of Education

Provides instructional support services for students enrolled in approved Voc Tech degree or certificate programs. Academic support services include: Peer Tutoring; Student intake and assessment; Support for students who are single parents or displaced homemakers; Instructional support in developmental courses; Computer-based learning systems.

DSP - Disadvantaged Student Project - Funded through the Board of Higher Education (McNair funds):

Provides retention services for ESL students who are transitioning to college level courses. Services include: Assistance in developing critical thinking skills; academic support services; advising; academic assessment and intake interviews; case management and student tracking.

Developmental Education

The goal at Northern Essex has always been to make education accessible to a wide variety of students. The college has long realized that while many incoming students have a strong desire to acquire an associate's degree or a certificate in a particular program, they don't always have the academic foundations needed to ensure success. The developmental education area at the college is committed to helping students acquire the skills they need to be successful at the college. The focus has always been holistic and learner centered. Both the affective as well as the academic needs of students are addressed. Through the Department of Developmental Studies, Northern Essex offers a series of courses designed to help students overcome any skill deficits so that they can eventually be successful in any program that they enter at the college. Recommendations for developmental courses are made when the assessment tests are completed. Students must follow these recommendations and pass these courses with minimum grades of C or C-. To exit Basic Writing and be eligible to go

on to Composition I students must pass a writing assessment which is given as the final exam in Basic Writing. These courses focus on the needs of students whose skills are inadequate as they exit high school as well as the needs of those students who have been away from an academic environment for a number of years and may lack confidence in their academic abilities. Students exiting our ESL courses also benefit from the developmental sequences. Courses offered under the umbrella of the Department of Developmental Studies include: Basic Writing, Basic Reading, College Reading, Basic Math, Basic Algebra I, Basic Algebra II, and all of the ESL course sequences. The Deaf and Hard of Hearing Cluster is also housed in this department. Within the Developmental Education area there are four Learning Centers designed to meet the individual needs of the students in the developmental courses and all students at the college are encouraged to use the centers to get assistance with math, reading, writing, or ESL.

THE ENGLISH LANGUAGE CENTER

The English Language Center provides individualized tutoring to students enrolled in the college's ESL classes as well as to former ESL students needing assistance in content area courses. Services are available to all students on a drop-in basis, at both the Haverhill Campus (Spurk Building C-207) and the Lawrence Campus (currently in the Dimitry Building L-200). For more information about services at either campus, contact the English Language Center at 978 556-3408.

THE MATH CENTER

The Math Center provides individual and group tutoring to students enrolled in the developmental math courses, Basic Math, Basic Algebra I, Basic Algebra II, as well as any other math course offered at NECC. The staff assists students with the development of math skills, and in addition, addresses specific needs such as math anxiety, calculator use, or questions about the math course sequence. Services are available to all students on a drop-in basis, both day and evening in Haverhill (Spurk Building, C-201) and Lawrence (Dimitry Building L-200). For more information, contact the Math Center in Haverhill at 978 556-3848.

THE READING CENTER

The Reading Center provides tutoring support to students enrolled in the Basic Reading and College Reading courses. Assistance in developing effective reading and study skills is offered to all students on a drop-in basis, both day and evening in Haverhill (Spurk Building, C-211) and Lawrence (Dimitry Building, L-200). For more information about services at either campus, contact the Reading Center at 978 556-3844.

THE WRITING CENTER

The Writing Center provides individualized tutoring to students enrolled in the college's Basic Writing and composition courses, as well as to students with writing assignments in content area courses. The staff can help with any stage of the writing process: beginning a paper, revising a draft, or editing a final draft. Services are available to all students on a drop-in basis, both day and evening, in Haverhill (Spurk Building, C205) and Lawrence (Dimitry Building, L-200). For more information about services at either campus, contact the Writing Center at 978 556-3407.

Northern Essex Libraries Bentley and Lawrence Campus

The Northern Essex Community College Libraries serve the varied informational needs of the students, faculty and staff of the college. The Libraries support the College's academic programs and provide for the research needs of students as well as the professional development of the faculty.

At the Bentley Library, located on the Haverhill Campus, there are more than 60,000 volumes in the reference and circulating collections. In addition to a collection of 400 journals, the Library subscribes to many electronic periodical databases which include the full-text of articles from thousands of journals and newspapers. These databases are available on campus and some are available to students from home through the Library's web page. At the Lawrence Campus Library, there are more than 6,000 volumes primarily in the areas of nursing, allied health, criminal justice and law. The library subscribes to 80 journals and also shares access to the Bentley Library's electronic resources. World Wide Web access is available at both Libraries.

The library staff provides reference and interlibrary loan service. In addition, Librarians provide instruction to groups and individuals on the research process and on strategies for locating library and electronic resources. Students and faculty are able to use other Massachusetts public colleges and university libraries, as well as area libraries. Additional educational resources are available through the Library's involvement in consortia that include most of the public and academic libraries in Eastern Massachusetts.

Library patrons at both libraries can search for books by using the computerized Public Access Catalog (PAC). The NECC Libraries membership in the NOBLE consortium (North of Boston Library Exchange) gives students access to catalogs of more than 30 eastern Massachusetts public and academic libraries. A student at NECC can request a book from any of these libraries and it will be delivered by the Northeast Regional Library System within a few days.

Professional staff are on duty during the hours the library is open. The library is closed every Sunday and all federal and state holidays.

Center for Instructional Technology

The Center for Instructional Technology is a proactive faculty resource center for traditional, new media, and web technology integration. Our mission is to support faculty instructional processes with state of the art, curriculum specific technology applications, integrated classroom technology systems, and distance learning facilities. Technology training, instructional design and curriculum design support is offered.

The CIT offers a full range of media support services through its component work groups including Media Services, Video Services, Digital Media Lab, and a Lawrence Campus DIT satellite operation.

The CIT takes a leadership role in fostering the development of both the technology support systems, and the training of NECC faculty in the use of these tools. CIT works very closely with the Office of Faculty and Staff Development to coordinate effective training programs for faculty. CIT staff serves as technology trainers and curriculum development coaches.

The CIT maintains a large, comprehensive collection of educational media materials in a variety of presentation formats. The materials include 16mm films, videotapes, filmstrips, slide programs, audio cassette tapes, records, and overhead transparencies. A software catalog is available at the CIT.

Production services include television, photographic, and multimedia program development. A director, technical staff, and work-study assistants work to provide concept to completion support in the development of original learning materials.

A television facility offers both studio and remote capability as well as editing and post-production. The CIT is an origination point for the community cable television system. The CIT is open from 8:00 am to 9:00 pm Monday through Thursday, Friday from 8:00 am to 5:00 pm, and Saturday from 9:00 am to 1:00 pm.



Specialized Study Opportunities

Career Development Center

The Career Development Center at NECC is a one-stop full service center which offers opportunities for career guidance, job placement, and professional growth. Included in the Center's services is a wide range of career assistance:

- Cooperative Education: a course offering placement in a field related to the student's major offers 3 academic credits upon successful completion of course requirements. (Adult Co-ops are also available for the veteran or transitioning job seeker.)
- Internship Assistance: staff and services that aid the student in internship searches and placement.
- Community Service Learning: opportunities for students to work in campus and area social service, civic, and other volunteer agencies as part of the national community service program.
- Career Counseling: a service that offers interest tests, decision-making, skill-building, and career focus groups.
- Full-and Part Time Placement: a service that aids students in the job search.
- Disney Opportunities: a program providing on-site work positions with the Disney Corporation.
- Career Development Workshops/Seminars: a service that provides campus and corporate workshops in topics pertinent to a company's or employees professional growth.
- Federal Work-Study Assistance: A program that offers NECC students on financial aid opportunities for work positions either on-campus or in qualified off-campus sites.

- School To Work: a collaboration with area school and business partnerships through which NECC representatives work on school and career choice issues with local, state, and federal participants students and staff from area elementary, middle and secondary schools; business mentors, and state and federal personnel.

(The focus of STW is to conduct connecting activities that will highlight the relationship between academic studies and job positions - NECC continues these career services for students enrolled here who are coming from high school STW programs.)

English as a Second Language

Courses in English as a Second Language (ESL) are available to assist students for whom English is not a native language and who lack the proficiency in academic English judged necessary to be successful in college level work. Upon acceptance into a degree program, applicants will be required to take an assessment test and may be required to increase general fluency and/or command of academic American English.

Individuals may take the College's English as a Second Language test battery (Grammar and Structure, Oral Communication Skills, Reading, Writing) to determine if they may profit by taking applicable courses. Call 978 738-7475 to make an appointment.

Non-native users of English may test out of all ESL classes at Northern Essex Community College by passing internal tests or by obtaining a score of 500 on the TOEFL with a 50 in the Listening Comprehension Section. (TOEFL: Test of English as a Foreign Language, Educational Testing Service, Princeton, NJ)

Full financial aid is available for those who qualify. A student must be enrolled in a degree or certificate program in order to receive financial aid.

Credit for Life Learning is not offered by the college for any English as a Second Language course.

English Language Cluster for Deaf and Hard of Hearing Students

Non-credit courses in English structure, writing and reading for deaf or hard of hearing students are available to help students strengthen their English skills and to prepare them for further academic work.

Upon acceptance into a degree program, applicants will be required to take an assessment test and may be required to take one or more of these courses to strengthen basic skills. Courses are taught in American Sign Language to deaf and hard of hearing students. Credit for Life Learning is not offered by the college for any English Language Cluster course.

Financial aid is available for those who qualify. A student must be enrolled in a degree or certificate program in order to receive financial aid. Cluster students are limited to one year of financial aid.

For details of this program call 978 556-3868 (TTY).

Dual Enrollment for High School Students

Students may take courses at Northern Essex for credit (on a full-time or part-time basis) while still in high school as participants in the College Experience for High School Seniors. Regular tuition and fees apply. For more information, contact the Office of Admission. The number is 978 556-3600. A limited number of high school juniors and seniors may be eligible to attend Northern Essex at no cost under the Dual Enrollment Program. For more information, contact your high school guidance office.

NECCUM Cross-Registration

Students enrolled at Northern Essex Community College may cross-register at any of the other educational institutions that form the Northeast Consortium of Colleges and Universities in Massachusetts (NECCUM). NECCUM members are Bradford College, Endicott College, Gordon College, Marian Court College, Merrimack College, Middlesex Community College, Montserrat College of Art, Northern Essex Community College, North Shore Community College, Salem State College and the University of Massachusetts/Lowell.

Students may register for a course at a participating NECCUM college if the course they need is not being currently offered at Northern Essex. The course must however be applicable toward their program requirements. To be eligible, a student must have a 2.0 GPA, be matriculated in a program, receive permission of the Registrar and host college, and be the equivalent of a full-time student (inclusive of NECCUM credits).

All policies, including the tuition and fees rate of this college, apply to NECCUM courses. If interested pick up a NECCUM application in the Registrar's Office.

Study Abroad Programs

As a member of the College Consortium for International Studies in Washington, Northern Essex offers study abroad programs in a variety of countries (China, Costa Rica, Dominican Republic, Ecuador, England, France, Germany, Greece, India, Ireland, Israel, Italy, Jamaica, Japan, Mexico, Portugal, Russia, Spain and Switzerland). These opportunities are currently under review and are not available every semester. Students can enroll in a year, semester, summer, or as short as one-week study travel "starter" programs. With advance planning and approval, study abroad credits can be readily applied to the student's degree requirements.

GED Testing

Northern Essex Community College is a Commonwealth-approved GED Testing Center. GED testing is scheduled every month throughout the calendar year. Individuals who are interested in acquiring a GED diploma must be at least 16 years old and must have formally withdrawn from high school

Registration for the GED test is by appointment only.
To register for the GED test, for advice about GED preparation, and for information about additional eligibility criteria, please call 978 556-3447.

Tech Prep

Tech Prep is a challenging and systematic program of study for students at participating high schools who wish to receive either college credit or advanced placement standing in specified fields of study for courses completed while still in high school. Call the Office of Admission at 978 556-3600 for more information.

Credit for Life Learning

The Credit for Life Learning assessment provides the opportunity for the matriculated adult student to earn college credit for the learning obtained from their life or work experiences. There are eight categories of experiences that may yield learning that qualifies for college credit: work, homemaking, volunteer work, non-credit courses, travel, recreation, hobbies and independent studies. You may be a candidate to receive credit for your life learning experience if you meet one of the following criteria:

- You have completed professional course work through your company.

- You have completed course work or certification from a recognized sponsor evaluated by the American Council on Education.

- You have completed a certified apprenticeship.

- You hold any specialized licensure.

- You have had professional and personal experiences that have resulted in college-level learning.

- You have attended an unaccredited college/university.

Students interested in credit for life learning should contact the Center for Adult and Alternative Studies (CAAS) at 978 556-3308. CLL credits can be earned through portfolio evaluation, credential evaluation, and by examination.

CLEP and DANTEs Credit

Northern Essex Community College awards credit in certain predetermined subject areas of the College Level Examination Program (CLEP) and the DANTEs program. Information about DANTEs and the CLEP program is available at the Kenoza Learning Center (the telephone number is 978 556-3399). Students should submit CLEP and DANTEs transcripts to the Office of Admission for evaluation of credit.

Subject Examinations

| <i>CLEP Exam</i> | <i>NECC Equivalent</i> | <i>Credits</i> | <i>Semester</i> | <i>Score Needed</i> |
|--|---|----------------|-----------------|---------------------|
| Principles of Accounting | AC6610/AC6611 Intro Accounting I/II | 6 | 2 | 45 |
| American Government | GV3310 American Government & Politics | 3 | 1 | 47 |
| History of U.S. I: Early Colonization /1877 | HI9913 U.S. History I | 3 | 1 | 47 |
| History of U.S.II: 1865 to the Present | HI9914 U.S. History II | 3 | 1 | 46 |
| Biology, General | BI5515/BI5525 Introductory Biology I & Biology II | 8 | 2 | 46 |
| Intro Business Law | LW6651 Business Law I | 3 | 1 | 51 |
| Chemistry, General | CH5501/CH5502 General Chemistry I & II | 8 | 2 | 47 |
| College Algebra & Trigonometry | MA5621 College Algebra & Trigonometry | 4 | 1 | 45 |
| College Level French Language | FR4401/FR4402 Intro French I & II | 6 | 2 | 39 |
| College Level German Language | FR4451/FR4452 Intermediate French I & II | 12 | 4 | 45 |
| College Level Spanish Language | GM4401/GM4402 Intro German I & II | 6 | 2 | 36 |
| College Level Spanish Language | GM4451/GM4452 Intermediate German I & II | 12 | 4 | 42 |
| Information Systems & Computer Applications | SP4401/SP4402 Introductory Spanish I & II | 6 | 2 | 45 |
| Human Growth & Development | SP4451/SP4452 Intermediate Spanish I & II | 6 | 2 | 50 |
| Principles/Micro-Economics | CT6626 Introduction to Information Processing w/BASIC | 4 | 1 | 52 |
| Principles/Macro-Economics | PS1205 Human Growth & Development Through Adolescence | 3 | 1 | 45 |
| Principles/Management | EC3322 Micro-Economics | 3 | 1 | 41 |
| Principles/Marketing | EC3323 Macro-Economics | 3 | 1 | 44 |
| Intro. Psychology | MG6666 Principles of Management | 3 | 1 | 46 |
| Intro. Sociology | MK6678 Principles of Marketing | 3 | 1 | 50 |
| Western Civilization I: Ancient Near East 1648 | PS1101 Introduction to Psychology | 3 | 1 | 47 |
| Western Civilization II: 1648 to the Present | SO3321 Introduction to Sociology | 3 | 1 | 47 |
| | HI9901 Western Civilization I | 3 | 1 | 46 |
| | HI9902 Western Civilization II | 3 | 1 | 47 |

Transfer After NECC

NECC students have successfully transferred to a large variety of both public and private colleges and universities. Northern Essex cannot guarantee that all courses taken at the college will transfer to four year colleges /universities. It is up to the transferring institution to decide which courses are acceptable. Therefore it is extremely important to begin the transfer process early.

The best way to maximize the number of credits that will transfer is to:

- Meet with your assigned faculty advisor and NECC transfer advisor to plan and select your electives carefully.
- Select your transfer institution early.
- Meet with a transfer advisor from the transfer institution and get their recommendations regarding courses that transfer to their college/university.
- Become a Joint Admissions student.

Selection of Courses for Transfer

It is the responsibility of students to select courses at Northern Essex that will be acceptable for their chosen field of study at a senior institution of their choice. Careful study of the catalog of that institution will answer most questions. Students should request (from the Office of Admission of the senior institution they select) a copy of that college's catalog. The Academic Advising Center also keeps copies of catalogs from those transfer institutions that students frequently attend. Advisors in the Academic Advising Center, as well as faculty advisors, are available to help students select courses that will satisfy both the degree requirements at Northern Essex, as well as those at transferring institutions.

Transfer Agreements

Transfer agreements exist between NECC and other colleges such as Bentley College, Emmanuel College, Framingham State College, Gallaudet University, Lesley College, Merrimack College, New England College, Northeastern University, Pine Manor College, Rivier College, Salem State College, Trinity College of Vermont, and the University of Mass/Lowell.

These agreements guarantee that specific courses taken at NECC will be accepted for transfer in designated programs at the senior institution. They do not necessarily guarantee that all courses taken at NECC will transfer. For further information about the exact NECC programs (majors) and courses that are a part of these agreements contact the Academic Advising Center.

Joint Admissions Programs

Northern Essex Community College participates in Joint Admissions Programs with the University of Massachusetts undergraduate campuses and most of the Massachusetts state colleges. This program allows participating students guaranteed admission to the institution of their choice, provided they graduate from NECC in an approved associate degree program and with a minimum cumulative grade point average of 2.5. Participating students receive academic advising and support from the Academic Advising Center throughout their career with NECC.

It is highly recommended (for proper advising) that students interested in participating in Joint Admissions submit a participation form through the Office of Admission. It is recommended that the form be submitted prior to completing 30 credits. During their final semester at NECC, before graduation, students must also complete the Intent to Enroll form for the institution they plan to attend. As participants in Joint Admission, they are not required to fill out an application form for that institution, nor do they have to pay an application fee.

Commonwealth Transfer Compact

In January 1990, the Board of Regents of the Commonwealth of Massachusetts adopted the following policy effective January 9, 1990. This policy concerns all students who are transferring from a Massachusetts state community college to a four-year Massachusetts state college or university with an Associate of Arts transfer degree or an Associate of Science transfer degree:

- Requirement for Transfer Compact Status: A student shall be eligible for Transfer Compact status if he or she has met the following requirements:
 - a. Completed an Associate degree with a minimum of 60 credit hours exclusive of developmental course work.
 - b. Achieved a cumulative grade point average of not less than 2.0 (in a 4.0 system) at the community college awarding the degree.
 - c. Completed the following minimum general education core, exclusive of developmental course work.

English Composition/Writing 6 credit hours

Behavioral and Social Science 9 credit hours

Humanities and Fine Arts 9 credit hours

Natural or Physical Science 8 credit hours

Mathematics 3 credit hours

The sending institution is responsible for identifying the transcript of each student who is a candidate for transfer under this compact.

- Credits to be Transferred: The 35 credits in general education specified above will be applied toward the fulfillment of the receiving institution's general education requirements.

A minimum of 25 additional credits will be accepted as transfer credits by the receiving institution. These credits may be transferred as free electives, toward the receiving institution's additional general education requirements, toward the student's major, or any combination, as the receiving institution deems appropriate.

Only college-level course credits consistent with the standards set forth in the Undergraduate Experience recommendations are included under this Compact. Credits awarded by the sending institution through CLEP, challenge examinations, and other life-experience evaluations for course credit may be included when the community college certifies that a student qualifies under this Compact.

- Credits Beyond the Associate Degree: To complete the baccalaureate degree, a student who transfers under this compact may be required to take no more than 68 additional credits unless:
 - a. the student changes his or her program upon entering the receiving institution, or
 - b. the combination of additional general education requirements, if any, and the requirements of the student's major at the receiving institution total more than 68 credits.



Under these circumstances, transfer students will be subject to the same requirements as native students. (The term “native student” refers to students who began their undergraduate education at the baccalaureate institution.)

A transfer student may not be held to any degree requirements at the receiving institution that were established less than three years prior to transfer admission.

- Admission to Competitive Majors or Programs: If, because of space or fiscal limitations, the receiving institution does not admit all qualified applicants to a given major or program, the receiving institution will use the same criteria for applicants who are transfer students under this Compact as it does for its native students.
- Transfer Records: The student with Transfer Compact status will be furnished by the receiving institution a list of courses to be fulfilled to earn a bachelors degree no later than the end of the semester the student enrolls. With the agreement of the student, copy will be provided to the Transfer Officer at the sending community college.
- Student Appeals: A student who believes that the provisions of this Compact have not been applied fairly to his/her transfer application has the right to appeal.

Alumni Relations

Alumni Office

The Alumni Relations Office organizes and coordinates the college's alumni program and strives to provide our over 21,000 alumni with a comprehensive and beneficial alumni program which will encourage them to stay connected and involved while encouraging them to give something back to their alma mater. The Alumni Office tracks graduates, sponsors a wide variety of educational and social programs and events, works with the Alumni

Association Advisory Board, conducts fundraising and showcases and promotes graduate success. Graduate benefits include: The NECC Alumni Bulletin newsletter; reduced memberships to the college's Wellness & Fitness Center; free use of the college library, placement office and career counseling services; opportunities to participate in the Alumni Mentor Program or career panels; access to Boston museum passes; and membership in the Alumni Association. The Alumni Association Advisory Board meets regularly to promote the interests of NECC Alumni and to foster an ongoing relationship between graduates, the college and the community. For additional information, contact the Alumni office at 978 556-3789 or drop by Room 301 in the Library (A) Building on the Haverhill campus.



Academic Policy & Procedures

Academic standards have been established at Northern Essex Community College to help students attain understanding, competence and excellence.

General Policies

Mandatory Assessment and Planned Placement

Assessment at NECC is defined as a test of a student's abilities in reading, writing and math.

1. All matriculated college students will be assessed prior to registration.
2. Non-matriculated students may take no more than 6 credits before they must be assessed (unless those credits are in math or English composition).
3. Students enrolling in any math or English composition course must be assessed in that area.
4. Non-native English speakers may take a different test, but they must show proficiency in English before they can take courses which carry graduation credits.
5. Testing accommodations will be made for students with disabilities in conjunction with the Learning Accommodations Center.

Academic Ethics and Plagiarism

The college expects all students to maintain high standards of academic honesty and integrity. Plagiarism is clearly an example of a violation of Academic Ethics and is a major offense.

Plagiarism is defined by the college to be the use of any other person's work or ideas as though the work or ideas were their own, without giving the appropriate credit.

Instructors are required to provide students with a clearly written definition of plagiarism applicable in their discipline as part of the course syllabus that they provide during the first two weeks of each course.

Students are responsible for understanding what plagiarism is in each of their classes. The college's definition and that of their instructor will be used as a criterion against which all plagiarism allegations will be judged. Instances of plagiarism will be addressed first by the instructor who discovers, or is made aware of, the incident. Instructors must discuss the evidence of plagiarism with the student prior to taking action. Instructors who take action as a result of a plagiarism incident may report such action to the Vice President of Academic Affairs. There shall be a range of penalties at the discretion of the instructor which may extend to a recommendation to the Vice President of Academic Affairs for expulsion from the College. The Vice President of Academic Affairs may take disciplinary action against students who are reported for plagiarism.

Students have a right to file a grievance if they feel that the action taken in the alleged plagiarism case discriminated or abrogated their individual or student rights. Students may contact the Vice President of Enrollment Management and Student Services Office for detailed information regarding the Board of Higher Education's Student Grievance Procedures.

Absence for Religious Reasons

Students who, due to religious beliefs, are unable to attend classes or to participate in any examination, study or work requirements on a particular day, shall be excused from any such examination or study or requirement, and shall be provided with an opportunity to make up such examination, study, or work requirement which they may have missed because of such absence on any particular day, provided, however, that such makeup examination or work shall not create an unreasonable burden upon the school. No fees of any kind shall be charged by the institution for making available to said students such opportunity. No adverse or prejudicial effects shall result to students for availing themselves of the provisions for an absence for religious reasons in accordance with Chapter 375, General Laws of the Commonwealth of Massachusetts.

Attendance and Non-Participation

Students are expected to attend each meeting of each class in which they are enrolled. The class instructor has full and final authority to decide whether a student is permitted to make up work missed through absence, and on what terms. Students should ask each of their instructors about their respective attendance policies.

Faculty have the academic authority to remove students from their class for non-attendance or non-participation. A non-participating (NP) student is one who, because of absences, missed quizzes, tests or papers, or inappropriate classroom behavior, has fallen behind the work of the class to such a degree that the instructor feels the student is not likely to attain a passing grade. In most cases, circumstances would indicate to the instructor that the student has dropped the course but neglected to drop it officially.

When students are removed from a class due to non-participation (NP), a grade of NW (Withdrawal due to non-participation) or F/N (Failure due to non-participation) will be assigned and recorded on their transcripts. Students who are NP'd will receive a letter from the Registrar along with instructions on reinstatement procedures.

Graduation, Program and Course Policies

Matriculated Status

Once students have matriculated—been accepted by the college into one of its associate degree or certificate programs of study—they must maintain a prescribed academic standing in order to continue from one semester to another. Matriculation must occur in order to graduate in one of NECC's programs of study.

Academic Residency Requirements

A minimum of 24 credits of course work for an associate degree program, and 12 credits of course work for a certificate program, are required in order to fulfill residency requirements. CLEP and CLL credit cannot be used to fulfill residency credit. In addition, students must be currently enrolled and matriculated at the time they are fulfilling their residency requirements, and be in their final year (or semester) of course work at the time they petition to graduate.

Courses Taken at Another College while Enrolled at Northern Essex Community College

When a student lacks one or two courses for completing requirements at Northern Essex, and problems of distance, course availability or class time make it very difficult to take the courses at this college, the student may request permission to take a course at another college. The forms are available at the Registrar's Office. Grades for courses transferred from another college are not computed in the QPA average at Northern Essex.

This alternative will be approved only in hardship situations and is subject to the following stipulations.

- Residency requirements will be met.
- All conditions prescribed in the student's curriculum plan are being met.
- The student provides this college with a detailed course description of the course.
- Written approval is received from the Registrar, and if appropriate the program coordinator, by the student before taking the course at another college.
- A grade of C or better is earned in the course.

Graduation Requirements

Northern Essex Community College awards Associate Degrees in Arts and Sciences, and Certificates to all qualified students at commencement exercises for each class. In order to receive this award, students must meet the following criteria:

- Completion of all required courses in a curriculum with a passing letter grade, or with the minimum letter grade specified for that course.
- Completion of the number of credit hours prescribed by a particular curriculum.
- Completion of final year of course work and a minimum of 24 credit hours of course work at NECC in order to qualify for a degree, and a minimum of 12 credits in classroom work to qualify for a certificate.
- Attainment of a cumulative quality point average (QPA) of 2.00 or higher.

- Completion of the petition for graduation with fee prior to deadline date as prescribed in the Academic Calendar.
- Payment of all financial obligations at the college.

High honors are awarded during commencement to all students with a cumulative quality point average of 3.50 or higher. Honors are awarded to all students with a cumulative quality point average of 3.00 to 3.49 inclusive.

Additional Associate Degrees or Certificates

Students may seek an additional associate degree or certificate at Northern Essex Community College by being accepted for matriculation into a new program after graduating from an initial program. Students must reapply through the Office of Admission.

To qualify, students must:

- Satisfy graduation requirements.
- Satisfy all of the specific program requirements.
- For those with an Associate Degree, complete a minimum of: 15 credits beyond the most recent Associate Degree to earn an additional Associate Degree; 9 credits beyond the most recent Associate Degree to earn a certificate.
- For those with a certificate, complete a minimum of: 15 credits at NECC beyond the most recent certificate to earn an Associate Degree; 9 credits at NECC beyond the most recent certificate to earn an additional certificate.

Dual Program Status

Students may pursue dual program status by entering a course of study that will allow them to complete two programs simultaneously. Students must apply through the Admissions Office for dual program matriculation.

Students must satisfy the requirements of each program and the requirements listed under the section above—Additional Associate Degrees or Certificates at Northern Essex Community College.

Students may not concurrently graduate from a certificate and associate degree program in the same subject matter.

Program/Course Requirements

When a course is listed as a requirement for a degree/certificate in a given curriculum, a student who meets the criteria may request approval from the appropriate divisional assistant dean and the Vice President of Academic Affairs to waive the course. The student receives no credit for waiving a course, and may need to take an alternative course to fulfill their program requirements.

Directed Studies Courses

In order to provide for a unique, highly individualized course of study for a single student, or a relatively small number of students, each academic department/program in the college offers Directed Studies courses. Such courses are designed to provide further study through directed readings, directed research projects or seminars, or special class work related to research in a specific subject. Each Directed Studies course is usually initiated in response to student interest, is limited to 5 or fewer students and should not be confused with a Special Topics course.

Special Topics Courses

Special Topics courses may be offered by any academic department/program with the approval of the divisional assistant dean responsible for that area and the chairperson of the Academic Services Committee. The divisional assistant dean, at the time of signing the approval form, shall forward an informational copy of the Special Topics course to the Vice President of Academic Affairs.

Special Topics courses are normally initiated by faculty or divisional assistant deans and are created for more than five (5) students. Special Topics courses are regular semester college courses and may be from one to four credits. Classes meet on a regular schedule.

Dates for submission of Special Topics proposals to the Academic Services Committee will follow the time schedule established by the Office of the Vice President of Academic Affairs. Approval for Special Topics courses may be granted twice by the chairperson of the Academic Services Committee. If the proposer expects to offer the course for more than two separate semesters, a formal course proposal should be submitted to the Academic Services Committee at the same time as the second request for a Special Topics approval. Both proposals will be considered for approval in order that the course may be offered until the Academic Services Committee and President have acted.

Course Loads

Students are responsible for knowing what courses are required in their curriculum and for meeting all other academic requirements.

Students are encouraged to take the number of courses they believe they can manage with good performance. Note, however, that omitted courses or their equivalent should be taken in summer session in order to graduate in two years.

Students may request to take more courses in one semester than the suggested schedule if they have attained a QPA of 3.00 or higher at Northern Essex and have the approval of their advisor. Final registration approval will depend on the availability of course seats.

Students who enroll in more courses than the suggested schedule may be required by the Registrar to drop a course.

Course Pre-requisites

If students do not have the necessary pre-requisite for a course in which they wish to register, it is necessary to obtain permission from the Divisional Assistant Dean or coordinator of the academic department/program which offers the course. Approved waivers must be on file in the Registrar's office prior to the 5th day of each semester or the student will be dropped from the course.

Adding a Course

A course for which a student did not register may be added to the student's schedule on a space available basis. A student who wishes to add a course must complete the Add portion of the College's Registration Form available in the Registrar's office. An advisor's signature is required if the total credit hours exceed six. Exact days, times and procedures for adding a course are published by the Registrar at the beginning of each Day, Evening or Summer session and are noted in the Academic Calendar.

Dropping a Course

Students may drop (withdraw from) a course anytime during the semester in accordance with this policy and the respective dates listed in the College Academic Calendar. To drop a course students must complete the Drop portion of the Registration Form, and submit the form to the Registrar's Office for processing. Before dropping a course, students should consult with their academic advisor and

also inform the instructor of the course that they are dropping the course. Students who are enrolled (matriculated) in a program and plan to drop ALL their courses and discontinue their studies, should officially Withdraw from College. The following Withdrawal grades are assigned when a course is dropped:

Period 1: No Withdrawal grade is assigned and the course is deleted from the registration record if a course is dropped during the official "drop and receive a refund" period. The present refund period is defined as the first fourteen calendar days for a full semester course, and for courses meeting eight weeks or less, the period of time prior to the third class meeting. For specific information about refunds, refer to the Refund Policy.

Period 2: An "W" withdrawal grade, which is non-punitive is assigned to a course that is officially dropped after the end of the course's refund period through the date specified in the current Academic Calendar. For regular semester courses a "W" grade is assigned if a course is dropped through the tenth Friday of the semester. For courses meeting eight weeks, a "W" is assigned if dropped through the fifth Friday. Note: A "NW" non-participation grade is assigned if the student is dropped for non-participation by the course instructor.

Period 3: A "FW" withdrawal grade which is non-punitive is assigned to a course that is officially dropped after the "W" period ends as specified in the Academic Calendar, but prior to the start of final examination week. Note: A "NW" grade is assigned if the student is dropped for non-participation by the instructor.

Students may not drop a course after Period 3 ends. Students who drop all of their courses will be considered to have Withdrawn from the College, and if matriculated, their program of studies. Students who were matriculated in a program will have to reapply for program admission per the Withdrawning from College policy. In addition, grades will be assigned in accordance with dates specified in the Academic Calendar and per college policy. Note: All "W"-type grades (see Grading System) currently carry no earned credit or quality points, but do appear on student transcripts.

The length of a Drop/Add period for accelerated or extended courses or sessions may vary, but is equivalent to the above mentioned policy, and posted accordingly. Exceptions to these policies may be made only by the Vice President of Academic Affairs. Consult the Academic Calendar for dates relative to dropping a course. Academic Calendars are published each semester and are available at the Registrar's Office, B-219.

Special Notice About Dropping a Course or Withdrawing from College

Students who are receiving any form of Financial Aid or Veterans Educational benefits, and students participating in college sports or other activities which have eligibility criteria, should consult with the respective office PRIOR to dropping a course. Reducing hour credit load may adversely affect eligibility to receive Financial Aid, Veterans Educational benefits, or make one ineligible to participate in collegiate sports or other activities. In addition, most private insurance companies require that students be full time (12 credits or more) to be eligible for coverage.

Withdrawing from College

Students who must drop all of their courses should officially Withdraw from College. Officially withdrawing from college will ensure that the correct grades are assigned for each course. To officially withdraw from the college, a student must complete a Withdrawal From College Form available at the Registrar's Office.

When a student officially withdraws from college, the student's course(s) will be assigned Withdrawal grades as prescribed in the Drop a Course policy. Note: In addition to the withdrawal grades listed in the Drop a Course policy, instructors have the option of assigning a "WP" grade—passing at the time of withdrawal. Students who discontinue their studies and officially Withdraw from College are no longer considered to be enrolled at the college or matriculated in their program. If the student wishes to return to the college and wants to be enrolled (matriculated) in a program, the student must officially reapply for admission to a program.

Repeating a Course

Students may repeat a course. In most academic programs, there is no limit to the number of times that such a course may be repeated. In each instance the highest grade received when repeating a course will be used to determine the QPA. Notation appears on the transcript for any repeated course.

Persons receiving any form of financial assistance should seek written approval from the representative of the agency providing the assistance; for example, the Regional Veteran's Administration Office, Massachusetts Rehabilitation Counselor, Financial Aid Director, etc.

Auditing a Course

Students may audit a course for no course credits by electing to enroll and attend a credit course for self-improvement or individual interest, without the responsibility of fulfilling academic assignments. An Audit Request Form, available in the Registrar's office, must be completed during the first twenty (20) calendar days after the start of the semester.

Enrollment of auditors in courses is subject to the approval of the Vice President of Academic Affairs or Registrar and the individual faculty member concerned. An audit grade CANNOT be changed to a regular course grade. Tuition for an audited course is the same as a regular course.

Retroactive Course Withdrawals

The Vice President of Academic Affairs is responsible for approving any retroactive course drops in a prior semester, and any retroactive withdrawal from college which affects an earned letter grade A through F.

In order to apply for a retroactive course drop or withdrawal, students must complete a Retroactive Withdrawal Petition available in the Registrar's Office. The Registrar will review the request, prepare supporting documentation if appropriate, and forward the petition to the Vice President of Academic Affairs for consideration. If approved, the action will result in a W grade appearing on the transcript for the course(s) in the prior semester, with W grade(s) dated as of the forty-fifth academic class day of that semester.

Grading System and Academic Standing

Grading System

Letter grades are used at the college per the table listed below, and each grade has a numeric range and associated Quality Point Value. The Quality Point Value is based on a 0.00 to 4.0 range, with an “A” grade having the highest value of 4.0. Grades are used to represent the quality of work done in a course and knowledge earned, as based on the individual instructor’s standards and course objectives.

The Quality Point Value is used to determine the numeric average of semester course work or of cumulative courses and grades to date. Such a computation is known as the Quality Point Average (QPA) of the grades earned to date. The Quality Point Values of a grade in combination with a credits attempted scale, are used to establish the college’s Standards of Academic Progress. The grades presently in use by the college are:

| Grade | QP Value | Numeric Range/Comment |
|-------|----------|--|
| A | 4.00 | 93-100 |
| A- | 3.70 | 90-92 |
| B+ | 3.30 | 87-89 |
| B | 3.00 | 83-86 |
| B- | 2.70 | 80-82 |
| C+ | 2.30 | 77-79 |
| C | 2.00 | 73-76 |
| C- | 1.70 | 70-72 |
| D+ | 1.30 | 67-69 |
| D | 1.00 | 60-66 |
| F | 0.00 | 59 or less; failure; no credit earned |
| W | 0.00 | Withdrawal from course by student within withdrawal period |
| NW | 0.00 | Non-participation withdrawal grade assigned by instructor within withdrawal period |

| Grade | QP Value | Numeric Range/Comment |
|-------|----------|--|
| P | 0.00 | Pass; credit earned |
| WP | 0.00 | Withdrawn passing |
| NC | 0.00 | No credit earned |
| I | 0.00 | Incomplete, in non-punitive period |
| IF | 0.00 | Incomplete changed to Incomplete Failure |
| FN | 0.00 | Non-participation failure grade assigned by instructor after withdrawal period |
| FW | 0.00 | Failure due to withdrawal from course by student after withdrawal period |
| AU | 0.00 | Audit; no credits earned |
| NG | 0.00 | No grade submitted by instructor |

Listed below is an example of how the **Quality Point Average** of grades is computed:

| Course Completed | Credits (Cr) Attempted | Grade Earned | Quality Point Value (QP) | Computation (Attempted cr. x quality points) |
|--------------------------|------------------------|--------------|--------------------------|---|
| English Composition I | 3 | A | 4.0 | 3 cr. x 4.0 QP = 12.0 QP |
| Introduction to French I | 3 | F | 0.0 | 3 cr. x 0.0 QP = 0.0 QP |
| College Algebra I | 3 | D | 1.0 | 3 cr. x 1.0 QP = 3.0 QP |
| US History I | 3 | B | 3.0 | 3 cr. x 3.0 QP = 9.0 QP |

Total Credits Attempted = 12 Total Quality Points earned = 24.0

To determine the Quality Point Average (QPA) of courses completed and grades earned, divide attempted credits into the total quality points earned: 12 credits divided into 24.00 = a QPA of 2.0. In this example, the student has a QPA of 2.0, or in other words an overall "C" average.

The QPA is also cumulative. Each semester a cumulative QPA is computed by dividing the total number of credits attempted in all semesters at the college into the total number of quality points earned in all semesters at the college. (One exception to this is for those students who have transferred from one program at the college into another. In that instance, those courses that have not been applied to the new program are not considered when determining the QPA.)

Attempted credit hours include credit hours with a letter grade of A, A-, B+, B, B-, C+, C, C-, D+, D, F, FN and IF. Grades of P, NC, I, W, NW, FW, WP, NG and AU are not included in the attempted credit hours. When a course is repeated the higher of the two grades will be computed in the QPA; only the credit hours for the higher grade will be included in the cumulative total of attempted hours. The transcript will record each time the course has been taken. (Refer to Repeating a Course in this section of the catalog for further details.)

Incomplete Grades

Students may receive a temporary grade of Incomplete (I) from instructors when all work in a course is not satisfactorily completed and, in the judgment of the instructor, completion of the assigned tasks would allow the student to earn a passing grade in the course. If the instructor assigns an I, a Documentation of Incomplete Grades form must be completed by the instructor and

placed in the student's folder that is maintained by the Registrar. The form will clearly outline the work to be completed and the time limit and must be submitted with semester grades. An instructor may change an I to a letter grade (other than a W grade) any time after it is assigned.

Instructors may accept late course work only when, in their judgment, there are acceptable reasons to justify such a delay. If a final examination is missed because of student inaction, as opposed to a cancellation of class or instructor inaction, the instructor may allow a make-up if, in the judgment of the instructor, successful completion of the final examination could earn the student a passing grade.

If, for any reason, the instructor has left Northern Essex permanently or for an extended period of time and is unavailable, the divisional assistant dean has the authority to change the grade using the Grade Change Form. The divisional assistant dean's decision is based upon a waiver of any existing documentation of the Incomplete. If documentation of expected work is not available, the divisional assistant dean may use professional judgment to determine work to be completed and the final grade.

Incomplete grades are temporarily not computed in determining the semester and cumulative QPA. Incomplete grades (I) are automatically converted to IF (Incomplete, Failure, no credit earned) grades at the end of the next semester, and are computed as F grades in the student's semester and cumulative QPA. The student is expected to take the initiative in seeking to complete course work necessary to change an I to another grade. An I cannot be changed to a W, NW, WP or grade by the instructor.

Pass/No Credit Grade Option –

Liberal Arts Program

A student who is enrolled in the Liberal Arts Program and has successfully earned 12 credits or more, may elect to enroll in a course under the Pass/No Credit grade option. The following criteria apply to the NC (no credit earned) grade option:

- Courses taken on Pass/No Credit basis may be used to fulfill the elective requirements only of the Liberal Arts degree. All specific course requirements must be taken for a letter grade.
- At no time may a grade for a course taken on a Pass/No Credit basis be converted to a letter grade.
- All credits earned for courses taken as Pass/No Credit will count towards the total credit hours required for a Liberal Arts degree, but will not be calculated into the student's quality point average.
- No more than 12 credit hours of Pass/No Credit courses may be applied toward the student's degree and no more than one course may be taken on this basis in any one semester.
- Some colleges may not permit the student to use courses taken as Pass/No Credit for transfer purposes. Responsibility for seeking information regarding the transferability of Pass/No Credit courses lies with the student.
- The Pass/No Credit Grade Option form must be completed and submitted to the Registrar no later than the sixth academic day of the semester in which the course is taken.

Approval from the course instructor is not necessary for the Pass/No Credit option. The instructor is, however, notified of your Pass/No Credit option. The Registrar may approve late applications for the Pass/No Credit option as appropriate. Pass/No Credit Grade Option forms are available only in the Registrar's office.

Changing Grades

To alter the final grade of a student, instructors must complete a Change of Grade form.

Change of Grade forms are available at the Registrar's office. Instructors must submit forms in person.

Mid-Semester Grades

Mid-semester grades are not routinely issued at Northern Essex. All students, however, have the right to request written evaluations from their instructors at any time during the semester. The Registrar's office has a mid-semester grade form available for students who wish to submit them to their instructors.

Student Academic Transcripts/Semester Grade Reports

All courses taken at Northern Essex Community College are maintained at the Registrar's Office and are recorded as a single permanent record. If the student successfully completes a program of study at Northern Essex Community College, the name of the degree or certificate earned will be noted on the transcript.

Transcripts may be reviewed by students in person by presenting an acceptable form of identification, such as a driver's license, college I.D. card, social security card, etc. Any written request for (or release of) an official transcript must contain the student's name, address, date of birth, social security number, and dates of attendance. Transcripts will be released to other parties only if written authorization from the student has been received. Official transcripts cost \$1.00 each.

Academic Standing

A student's academic standing indicates progress towards a degree. A minimum over-all average grade is required to continue from one semester to another. There are three categories of academic standing. These are described as follows:

Good Standing: Good standing is defined as follows:

- A QPA of 1.50 after attempting one to nineteen credit hours
- A QPA of 1.75 after attempting twenty to thirty-six credit hours
- A QPA of 1.90 after attempting thirty-seven to fifty-four credit hours
- A QPA of 2.00 after attempting fifty-five or more credit hours.

Probation: Probation is a warning that a student must show academic improvement in order to maintain enrollment within a program. Students on probation receive a written warning from the Vice President of Academic Affairs at the beginning of the semester in which their QPA falls in the probationary range. This letter states that students on probation must consult with an advisor from the Academic Advising Center, and plan a course of studies to improve grades. Upon attaining grades of good standing, probationary status is removed. Probation status is assigned as follows:

- A QPA below 1.50 after attempting one to nineteen credit hours.
- A QPA below 1.75 after attempting twenty to thirty-six credit hours.
- A QPA below 1.90 after attempting thirty-seven to fifty-four credit hours.
- A QPA below 2.00 after attempting fifty-five or more credit hours.

Suspension: Students are put on suspension as a result of unsatisfactory academic progress. Suspension automatically drops students from their academic programs and denies students eligibility to return in the following semester. Students are informed in writing by the Vice President of Academic Affairs that they are suspended. The letter includes information regarding academic advising available to assist students in improving their academic progress. It also explains the actions students must take if they desire to continue enrollment at NECC as a “special conditions student” or be reinstated into their academic program at the college at a later date. Suspension is assigned as follows:

- A QPA less than 1.00 after attempting one to nineteen credit hours.
- A QPA less than 1.50 after attempting twenty to thirty-six credit hours.
- A QPA less than 1.75 after attempting thirty-seven to fifty-four credit hours.
- A QPA below 1.90 after attempting fifty-five or more credit hours; but less than nine credit hours beyond the total required in the student’s curriculum.
- A QPA below 2.00 after attempting nine credit hours beyond the total required in the student’s curriculum.

Petition to Return as a “Special Conditions Student”

Students who are suspended may petition the Vice President of Academic Affairs, through the Academic Advising Center, to continue enrollment at NECC as a “Special Conditions Student.” After consultation with an academic advisor, students may be allowed to take a limited number of classes at Northern Essex while suspended (usually no more than two).

Student’s who desire to do so, must fill out a Petition to Return as a Special Conditions Student Form. The petition can be obtained at the Academic Advising Center. An approval signature is given only after the student meets with an advisor to discuss course selection; provide reasons for unsatisfactory progress, and develops a plan for improving grades.

Removal from Suspension

Students who show improvement in their academic progress by successfully completing necessary courses and raising their cumulative QPA above suspended status may petition the Vice President of Academic Affairs, through the Academic Advising Center, to be removed from academic suspension and return to their academic program. Students who desire to do so must fill out a Petition to Return to Academic Program Form, which can be obtained at the Academic Advising Center.

Students must meet with an academic advisor to review their academic progress and develop plans for continued improvement. The current cumulative QPA, along with the student’s academic progress to date is used to determine the future academic status of the student. At this time a recommendation is made as to whether or not the improvement has been sufficient to warrant reinstatement into an academic program.

Honors

Each semester students are appointed to the Dean’s List for Academic Honors if they fulfill the following requirements:

- They are candidates for a degree.
- They are carrying 12 or more credit hours within the semester.
- They attain a quality point average of 3.00 or higher within the semester.

Associate Degrees & Certificate Programs

Academic Affairs

Under the leadership of the Vice President of Academic Affairs, programs of study at Northern Essex Community College are offered through the cooperative efforts of four academic areas, each directed by an Associate Dean. Three areas administer the associate degree and certificate programs of study: Business and International Programs, and Non-Traditional Learning; Math/Science, Technology, and Health Professions; and, Humanities, Social Sciences, and Human Services Professions. The fourth, Instructional Support, is a multi-purpose, service-oriented academic area that assists students to assess and improve academic skills.

Associate Degree Programs

Northern Essex Community College offers a variety of academic programs leading to the attainment of an Associate of Arts or Associate of Science Degree. Associate degree programs carry a minimum of 60 credits and follow a required or recommended sequence of courses. These programs are carefully designed to develop the knowledge, skill, abilities and appreciation that the College has determined essential to receive degree status. Students intending to continue their studies are encouraged to review specific college requirements with their advisors to obtain highest transferability of the NECC coursework.

Degree Options

Specific degree options within degree programs will recommend or require a minimum of either six courses or twenty credits as defined within the college catalog and will be included on the college transcript.

A. TRANSFER ASSOCIATE DEGREE PROGRAMS

The primary transfer programs at Northern Essex are Liberal Arts, Business Transfer and Engineering Science. These programs are parallel to the first two years of similar programs in most public and private senior colleges throughout the country and provide a solid basis for transfer with advanced standing.

B. CAREER ASSOCIATE DEGREE PROGRAMS

Career associate degree programs are intended to provide the theory and technical knowledge to develop the professional skills students need to qualify for entry into the job market immediately after graduation. Many of these programs include practicum experiences while others may be supplemented with cooperative education courses for on-the-job training. Individual courses within these programs may have transfer potential into related degrees at senior colleges.

C. GENERAL STUDIES DEGREE PROGRAM

The General Studies Program is designed for students who have not yet decided on a particular field of study to provide a flexible curriculum which combines a core of transfer courses with an opportunity to explore occupational courses in areas such as engineering, computer science, management and health professions through 24 credits of free electives.

Certificate Programs

NECC certificates are awarded for an area of concentration that develops specific skills needed for immediate job entry into a career field/cluster or further study in a clearly identified area of specialization within a discipline. NECC awards several types of certificates.

A. Certificate

The NECC Certificate is awarded for a 24 credit or more program.

B. Certificate of Completion

The NECC Certificate of Completion is awarded for a 15-23 credit certificate program.

C. Certificate of Accomplishment or Participation

The NECC Certificate of Accomplishment or Participation is awarded for certificate programs up to 14 credits or for noncredit courses.

Many of these certificate programs provide practicum experience, while others may be supplemented with cooperative education courses for alternative on-the-job experience. Most certificate programs may be applied in part or whole towards an appropriate degree program or General Studies degree. Individual courses within these programs may have transfer potential.

Northern Essex Community College reserves the right to withdraw or revise any Associate Degree, Certificate Program, or Course Description listed in this Catalog.

Supplements to this document may be issued from time to time to present new or additional information.

Electives

Electives are courses not specifically prescribed in a curriculum. The definitions listed below are meant to help students make elective choices for their respective programs. Students should consult their Academic Advisor before registering for elective courses.

ELECTIVE OR FREE ELECTIVE:

Any college level course offered at Northern Essex Community College. Note: All developmental courses are excluded.

BUSINESS:

Any course offered by the following departments with associated prefixes:

Business Administration:

AC, BU, EC, FI, HR, LW, MG, MK

Business Information Technology:

SL, SH, SK, TL, TW

Health Information Technology:

MR, HS

LIBERAL ARTS ELECTIVE:

Any college level course offered by the following departments with the associated prefixes:

History and Government:

GE, GV, HI

Behavioral Sciences:

PS, SO

Foreign Language/Philosophy/Religion:

AL, FR, GM, IT, SP, PH, and RE

English:

EN, except for English Composition I & II and HU

Creative Arts:

FA, MU, TH

Math:

Natural Science:

BI, CH, ES, PI, SC

HUMANITIES ELECTIVES:

Any college level course which falls within the areas of communications, humanities, literature, foreign language, philosophy/religion and creative arts as defined below:

Humanities:

Any course beginning with HU

Communications:

Any course beginning with EN that is offered by the English Department *except* English Composition I and II Literature:

Any course beginning with EN containing Literature in the title

Creative Arts:

Any course beginning with FA, MU, or TH

Art:

Any art course beginning with FA

Dance:

Any dance course beginning with FA

Music:

Any course beginning with MU

Theatre:

Any course beginning with Th

Foreign Language:

Any course beginning with AL, FR, GM, IT, or SP

Philosophy/Religion:

Any course beginning with PH or RE

SOCIAL SCIENCE ELECTIVE:

Any course offered by the Department of History & Government and/or the Department of Behavioral Sciences or any course with the prefix of GE, GV, HI, PS or SO

Behavioral Science:

Any course offered by the Department of Behavioral Sciences or any course with the prefix of PS or SO

History and Government:

Any course offered by the Department of History and Government or any course with the prefix of GE, GV or HI

NATURAL SCIENCE ELECTIVE:

Any course offered by the Department of Natural Sciences or any course with the prefix of BI, CH, ES, PI, or SC

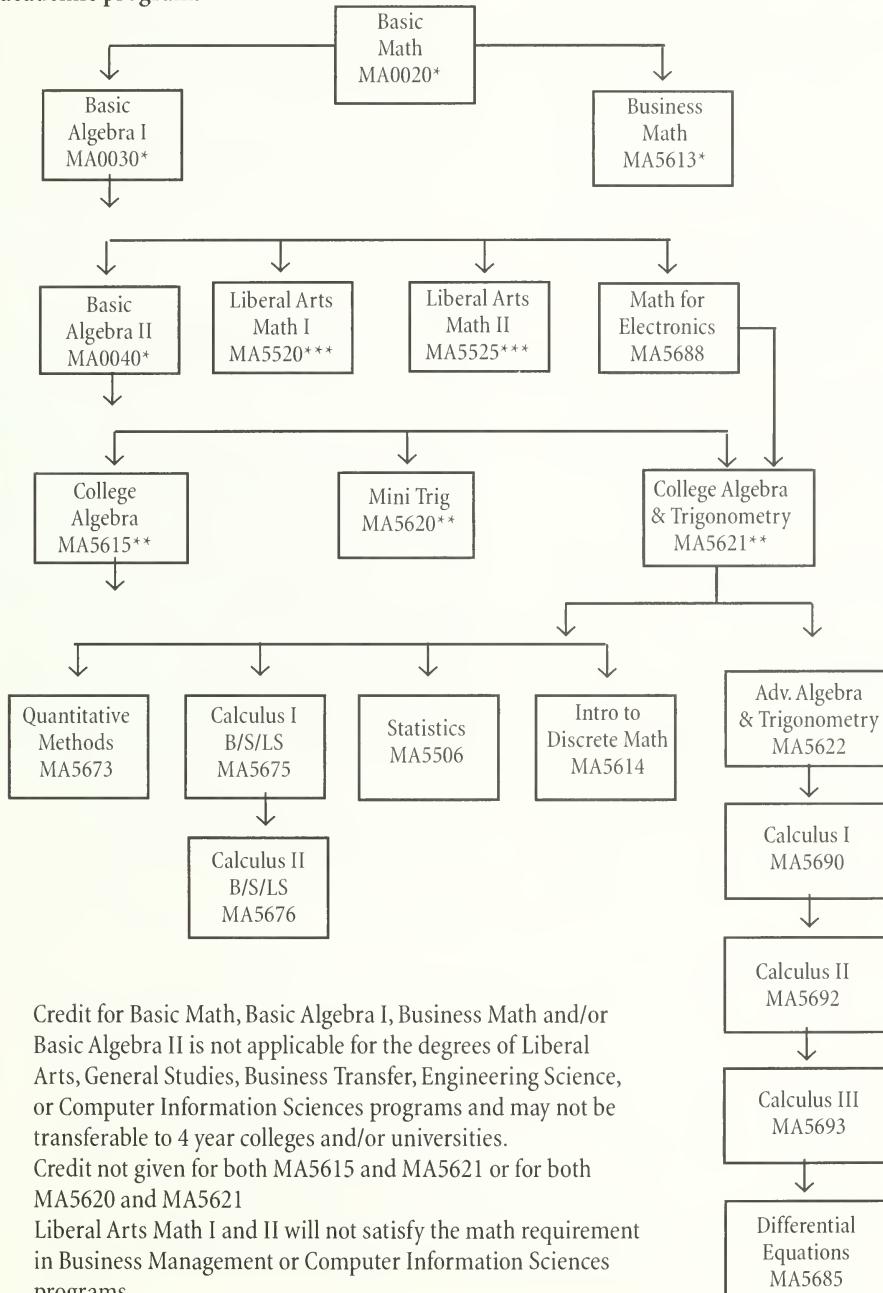
Note: Students need to be aware that there are 3 and 4 credit sciences. The elective/s chosen must meet the number of credits specified in the curriculum.

MATH ELECTIVE:

A math elective is satisfied by any math course with a course number higher than MA0040 unless otherwise stated in a program description.

Math Chart

The Math Chart represents the relationship and sequencing of the math courses offered at NECC. Your initial placement into a sequence of math courses is dependent upon your Math Assessment Test result. **Individual programs require particular math courses and sequencing. Please see an academic advisor before selecting the math course sequences in your academic program.**



- * Credit for Basic Math, Basic Algebra I, Business Math and/or Basic Algebra II is not applicable for the degrees of Liberal Arts, General Studies, Business Transfer, Engineering Science, or Computer Information Sciences programs and may not be transferable to 4 year colleges and/or universities.
- ** Credit not given for both MA5615 and MA5621 or for both MA5620 and MA5621
- *** Liberal Arts Math I and II will not satisfy the math requirement in Business Management or Computer Information Sciences programs.

Developmental Reading Course Requirements

Developmental Reading Policy

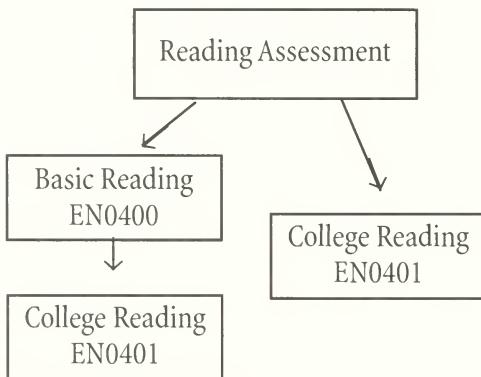
The state of Massachusetts has mandated that all students who score 68 or below on the CPT Reading Test must be enrolled in a course of developmental reading instruction to improve their skills.

At Northern Essex, developmental reading instruction is provided through two courses, EN0400 Basic Reading and EN0401 College Reading (please see catalog descriptions). Students are initially placed in these courses as a result of their assessment test.

Students who initially enroll in EN0400 Basic Reading are also subsequently required to enroll in EN0401 College Reading (under exceptional circumstances, MAPP policy may allow for a postponement or waiver of this requirement).

By state policy, the credits earned for these courses may not be applied to graduation requirements.

Developmental Reading Chart



The Curriculum Plan

The plan of study for each associate degree or certificate program indicates all or some of the following:

- Specific courses, by number and title, which must be completed and the sequence in which they must be completed.
- Required types of courses, such as science, mathematics, humanities, social sciences, etc., which must be completed.
- Elective opportunities (not otherwise limited by specific program requirements) where any course or courses for graduation credit can be chosen as long as the required number of credits to earn the degree is satisfied.

In order to meet the requirements in four semesters, a student must complete an average of at least 15 credit hours each semester. This pace involves a course load which, for a variety of reasons, is too heavy for many students. Therefore, many students take five and six semesters to complete their requirements. The college, therefore, defines a full time student as one who is carrying 12 credit hours in one semester.

Students, in consultation with advisors, select courses and create their schedule during the registration period. If students are not able to take the courses in the order in which they are listed in the curriculum plan, students must be certain that they have fulfilled any stated prerequisites for courses that are selected out of sequence.

Associate Degree Program Listing

NOTE: The sequence of courses in associate degree programs allows these programs to be completed in two years by full time students. Many of our students design three to five year plans or accelerate their progress by attending summer and/or evening classes. For more information, see an advisor.

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| Liberal Arts: Creative Arts Option | 77 |
| Liberal Arts: Cross-Cultural Option | 77 |
| Liberal Arts: Dance Option | 78 |
| Liberal Arts: History Option | 78 |
| Liberal Arts: International Relations Option | 79 |
| Liberal Arts: Journalism/Broadcasting Option | 79 |
| Liberal Arts: Legal Studies Option | 80 |
| Liberal Arts: Music Option | 80 |
| Liberal Arts: Philosophy Option | 81 |
| Liberal Arts: Political Science Option | 81 |
| Liberal Arts: Psychology Transfer Option | 82 |
| Liberal Arts: Science Options | 82-83 |
| Liberal Arts: Biology Option | 82 |
| Liberal Arts: Chemistry Option | 83 |
| Liberal Arts: Earth Science Option | 83 |
| Liberal Arts: Physics Option | 83 |
| Liberal Arts: Social Work Transfer Option | 84 |
| Liberal Arts: Teacher Exploration Option | 84 |
| Liberal Arts: Theater Option | 85 |
| Liberal Arts: Women's Studies Option | 85 |
| Liberal Arts: Writing Option | 86 |
| Nursing: Registered, Day & Evening Option | 89-90 |
| Paralegal Studies: Career Option & Transfer Option | 87 |
| Radiologic Technology | 88 |
| Respiratory Care | 90 |

Criminal Offender Record Information & Sex Offender Record Information Checks

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, may be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check. Depending on the contents of a student's CORI or SORI, participation in an academic program or a cooperative education experience or clinical or practicum affiliation related thereto may be denied. CORI checks may be performed pursuant to Mass. General Law Chapter 6, Sections 167-178B, consistent with guidelines promulgated by the executive Office for Health and Human services, and the Commonwealth's Department of Public Health. SORI checks may be performed pursuant to Mass. General Law Chapter 6, Section 178C.

For more information please contact the Registrar at 978-556-3700.

ACCOUNTING

The associate in science degree program in Accounting provides a basic core of business courses which introduces students to a broad variety of areas within the field of business and prepares them to select that particular phase of specialization which best suits their needs, abilities and interests. The Accounting specialization is designed to prepare students to enter business, industry or government in the specific field of accounting. 63/67 credit hours are required for graduation.

FIRST SEMESTER

| | | CREDITS |
|--------|-------------------------------|---------|
| EN4401 | English Composition I | 3 |
| AC6610 | Introductory Accounting I | 3 |
| | Mathematics Elective* | 3 |
| BU4400 | Introduction to Business | 3 |
| PS1101 | Introduction to Psychology OR | |
| SO3321 | Introduction to Sociology | 3 |
| TW6650 | Document Processing** | 3 |

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SECOND SEMESTER

| | | CREDITS |
|--------|-------------------------------|---------|
| EN4402 | English Composition II | 3 |
| AC6611 | Introductory Accounting II*** | 3 |
| | Mathematics Elective* | 3 |
| PS1101 | Introduction to Psychology OR | |
| SO3321 | Introduction to Sociology | 3 |
| CT6630 | Computer Applications | 3 |

15

THIRD SEMESTER

| | | CREDITS |
|--------|----------------------------------|---------|
| AC6683 | Computerized Accounting Systems† | 3 |
| AC6620 | Intermediate Accounting I† | 3 |
| AC6682 | Tax Accounting† | 3 |
| LW6651 | Business Law I | 3 |
| EN8011 | Public Speaking OR | |
| EN8020 | Interpersonal Communication | 3 |
| | Natural Science Elective* | |

3/4

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FOURTH SEMESTER

| | | CREDITS |
|--------|------------------------------|---------|
| | Economics Elective††† | 3 |
| MG6666 | Principles of Management | 3 |
| AC6621 | Intermediate Accounting II†† | 3 |
| AC6671 | Cost Accounting† | 3 |
| | Elective* | 3 |

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* Basic Math, Basic Algebra I and Basic Algebra II, Basic Writing, College Reading, and other developmental courses do not satisfy Math, Business, Liberal Arts, Natural Science, or elective requirements.

** Students with computer keyboarding skills can waive TW6650 Document Processing by passing the computer keyboarding assessment test. Students who choose not to take the assessment test, and those assessed with low keyboarding skills must take this course in their first semester.

*** Prerequisite: A grade of C or better in Introductory Accounting I.

† Prerequisite: AC6611 Introductory Accounting II.

†† Prerequisite: AC6620 Intermediate Accounting I.

††† NOTE: Transfer student should take EC3322 Micro-Economics to receive transfer credit, non-transfer students can take EC3652 Survey of Economics.

ADMINISTRATIVE MANAGEMENT:

Administrative Assistant Option

The associate in science degree program in Administrative Management: Administrative Assistant Option is designed to train students to assume positions on the administrative and executive levels. The two-year curriculum offers a balanced program of academic and technical courses leading to specialization in the Administrative Management area. 60 credit hours are required for graduation.

FIRST SEMESTER

| | | CREDITS |
|--------|--|---------|
| EN4401 | English Composition I | 3 |
| AC6610 | Introductory Accounting I | 3 |
| | Mathematics Elective* | 3 |
| TW6651 | Word Processing for the Administrator† | 3 |
| MA5613 | Business Math | 3 |
| CT6630 | Computer Applications | 3 |

15

SECOND SEMESTER

| | | CREDITS |
|--------|------------------------------|---------|
| EN4402 | English Composition II | 3 |
| AC6611 | Introductory Accounting II | 3 |
| SL6675 | Advanced Word Processing†† | 3 |
| SL6663 | Integrated Office Procedures | 3 |
| SL6682 | Business Communication | 3 |

15

THIRD SEMESTER

| | | CREDITS |
|--------|----------------------------------|---------|
| SH6601 | Notetaking | 3 |
| BU4430 | Business Software Integration††† | 3 |
| SO3321 | Introduction to Sociology OR | |
| PS1101 | Introduction to Psychology*** | 3 |
| | Business Elective* | 3 |
| | Liberal Arts Elective** | 3 |

15

FOURTH SEMESTER

| | | CREDITS |
|--------|-------------------------|---------|
| SK6653 | Machine Transcription | 3 |
| | Business Elective* | 6 |
| | Liberal Arts Elective** | 6 |

15

† Prerequisite: TW6650 Document Processing or equivalent.

NOTE: An entrance test is given to those who do not take the prerequisite course prior to acceptance into TW6651 Word Processing for the Administrator. Students with good keyboarding and formatting skills should take TW6651 Word Processing for the Administrator. Students who need to develop keyboarding and formatting skills should take TW6650 Document Processing.

†† Prerequisites: Keyboarding and document processing skills (TW6651 Word Processing for the Administrator or equivalent).

††† Prerequisite: TW6650 Document Processing or equivalent, and CT6630 Computer Applications.

* Business Electives: Any courses offered with the following prefixes AC, BU, FI, LW, MG, MK, SL, SH, TW, MR or HS.

** Liberal Arts Electives: must be selected among Humanities, Social Science, Natural Science.

*** SO3324 Cultural Anthropology can be substituted for either Introduction to Psychology or Introduction to Sociology.

ADMINISTRATIVE MANAGEMENT:

Medical Administration Option

The associate in science degree program in Administrative Management: Medical Administration Option is designed as an intensive program of general education, Administrative Management, and Health Information Technology courses. This program prepares students for employment in health care business offices, insurance companies, and other businesses directly related to the health care industry. 63 credit hours are required for graduation.

FIRST SEMESTER

| | CREDITS |
|---|---------|
| EN4401 English Composition I | 3 |
| TW6651 Word Processing for the Administrator† | 3 |
| CT6630 Computer Applications | 3 |
| MA5613 Business Math | 3 |
| SC5503 Integrated Science I | 3 |
| MR6605 Introduction to Medical Language I | 3 |
| | 18 |

SECOND SEMESTER

| | CREDITS |
|--|---------|
| EN4402 English Composition II | 3 |
| AC6610 Introductory Accounting I | 3 |
| SL6675 Advanced Word Processing†† | 3 |
| MR6606 Introduction to Medical Language II | 3 |
| SC5504 Integrated Science II | 3 |
| | 15 |

THIRD SEMESTER

| | CREDITS |
|---|---------|
| AC6611 Introductory Accounting II | 3 |
| SL6682 Business Communication | 3 |
| BU4430 Business Software Integration††† | 3 |
| SL6663 Integrated Office Procedures** | 3 |
| SO3321 Introduction to Sociology OR | |
| PS1101 Introduction to Psychology*** | 3 |
| | 15 |

FOURTH SEMESTER

| | CREDITS |
|--|---------|
| SL6665 Essentials of Administrative Management | 3 |
| MR or MS elective* | 3 |
| Business Elective or Practicum | 3 |
| SO3321 Introduction to Sociology OR | |
| PS1101 Introduction to Psychology*** | 3 |
| Elective** | 3 |
| | 15 |

† Prerequisite: TW6650 Document Processing or equivalent. NOTE: An entrance test is given to those who do not take the prerequisite course prior to acceptance into TW6651 Word Processing for the Administrator. Students with good keyboarding and formatting skills should take TW6651 Word Processing for the Administrator. Students who need to develop keyboarding and formatting skills should take TW6650 Document Processing.

†† Prerequisites: Keyboarding and document processing skills (TW6651 Word Processing for the Administrator or equivalent).

†††Prerequisite: TW6650 Document Processing or equivalent, and CT6630 Computer Applications.

* MR and MS electives include: MR6661/2 Medical Record Transcription I & II; MR7001 Coding & Classification for Medical Billing; MS1005 Medical Transcription for Medical Assistants; MR6629 Medical Coding & Classification Systems. This elective is designed for students transferring in; new students can be advised accordingly.

** NOTE: If MS1015 Fundamentals of Medical Assisting: Administrative is completed with a grade of 'C' or better, the SL6663 Office Administration requirement is waived.

*** SO3324 Cultural Anthropology can be substituted for either Introduction to Psychology or Introduction to Sociology.

ADMINISTRATIVE MANAGEMENT: Travel & Tourism Option

The associate in science degree program in Administrative Management: Travel and Tourism Option has been designed to provide students with the information required for employment in travel agencies, corporate travel offices, and airline agencies. Training involves Sabre System. 60 credit hours are required for graduation.

| FIRST SEMESTER | CREDITS |
|--|----------------|
| EN4401 English Composition I | 3 |
| AC6610 Introductory Accounting I | 3 |
| Document Processing OR | |
| Word Processing for Administrators* | 3 |
| MA5613 Business Math | 3 |
| SL6682 Business Communications | 3 |
| | 15 |
| SECOND SEMESTER | CREDITS |
| EN4402 English Composition II | 3 |
| AC6611 Introductory Accounting II** | 3 |
| Word Processing for the Administrator OR | |
| Business Elective | 3 |
| BU4400 Introduction to Business | 3 |
| Introduction to Sociology/Psychology | 3 |
| | 15 |
| THIRD SEMESTER | CREDITS |
| TL1001 Introduction to Travel/Tourism Industry | 3 |
| TL1010 Reservation/Ticketing I | 3 |
| Liberal Arts Elective*** | 3 |
| Liberal Arts Elective**** | 3 |
| SL6663 Integrated Office Procedures | 3 |
| | 15 |
| FOURTH SEMESTER | CREDITS |
| Cooperative Education OR | |
| Business Elective | 3 |
| TL1020 Reservation & Ticketing II | 3 |
| TL1015 International/Domestic Destinations | 3 |
| Liberal Arts Elective**** | 3 |
| SH6601 Notetaking | 3 |
| | 15 |

* Choose appropriate course after consultation with advisor.

** Prerequisite: A grade of C or better in AC6610 Introductory Accounting I.

*** Introduction to Geography recommended.

**** Foreign language recommended.

NOTE: Partnership with Essex County Travel Services located at Northern Essex Community College, Room C-202. Live travel agency for student hands on applications.

BUSINESS MANAGEMENT

The associate in science degree program in Business Management provides a basic core of business courses which introduces students to a variety of areas within the field of business. A wide choice of business management electives allows students maximum flexibility in choosing their programs of study. This program may be preferred by those not wishing to decide upon a specific concentration after completing the first year core program, or by those planning to transfer to a four-year college who want the flexibility of choosing specific business electives for a particular institution. 60/64 credit hours are required for graduation.

| FIRST SEMESTER | CREDITS |
|--------------------------------------|----------------|
| EN4401 English Composition I | 3 |
| AC6610 Introductory Accounting I | 3 |
| Mathematics Elective* | 3 |
| BU4400 Introduction to Business | 3 |
| SO3321 Introduction to Sociology OR | |
| PS1101 Introduction to Psychology | 3 |
| TW6650 Document Processing** | 3 |
| | 15/18 |
| SECOND SEMESTER | CREDITS |
| EN4402 English Composition II | 3 |
| AC6611 Introductory Accounting II*** | 3 |
| Mathematics Elective* | 3 |
| PS1101 Introduction to Psychology OR | |
| SO3321 Introduction to Sociology | 3 |
| CT6630 Computer Applications | 3 |
| | 15 |
| THIRD SEMESTER | CREDITS |
| FI3652 Business Finance† | 3 |
| LW6651 Business Law I | 3 |
| MK6678 Marketing†† | 3 |
| EN8011 Public Speaking OR | |
| EN8020 Interpersonal Communication | 3 |
| Business Elective* | 3 |
| | 15 |
| FOURTH SEMESTER | CREDITS |
| Economics Elective††† | 3 |
| MG6666 Principles of Management | 3 |
| Business Elective* | 3 |
| Elective* | 3 |
| Natural Science Elective* | 3/4 |
| | 15/16 |

* Basic Math, Basic Algebra I & Basic Algebra II, Basic Reading, Basic Writing, College Reading and other developmental courses do not satisfy Math, Business, Liberal Arts, Natural Science, or elective requirements.

** Students with computer keyboarding skills can waive TW6650 Document Processing by passing the computer keyboarding assessment test. Students who choose not to take the assessment test, and those assessed with low keyboarding skills must take this course in their first semester.

*** Prerequisite: A grade of C or better in Introductory Accounting I

† Prerequisite: AC6611 Introductory Accounting II

†† Prerequisite: BU4400, Introduction to Business

††† NOTE: Transfer students should take EC3322 Micro-Economics to receive transfer credit; nontransfer students can take EC3652 Survey of Economics.

BUSINESS MANAGEMENT:

Computer Applications Option

The associate in science degree program in Business Management: Computer Applications Option provides a basic core of business courses that introduces students to a variety of areas within the field of business. A wide choice of business management electives allows students maximum flexibility in choosing their program of study. This program may be preferred by those planning to transfer to a four year college who want the flexibility of choosing specific business electives for a particular institution. 61/65 credit hours are required for graduation.

FIRST SEMESTER

| | CREDITS |
|----------------------------------|---------|
| EN4401 English Composition I | 3 |
| AC6610 Introductory Accounting I | 3 |
| Mathematics Elective* | 3 |
| BU4400 Introduction to Business | 3 |
| CT6630 Computer Applications | 3 |
| TW6650 Document Processing** | 3 |

15/18

SECOND SEMESTER

| | CREDITS |
|--------------------------------------|---------|
| EN4402 English Composition II | 3 |
| AC6611 Introductory Accounting II*** | 3 |
| Mathematics Elective* | 3 |
| PS1101 Introduction to Psychology OR | |
| SO3321 Introduction to Sociology | 3 |
| BU4430 Business Software Integration | 3 |

15

THIRD SEMESTER

| | CREDITS |
|--------------------------------------|---------|
| FI3652 Business Finance† | 3 |
| LW6651 Business Law I | 3 |
| CT6632 Data Management Applications | 3 |
| PS1101 Introduction to Psychology OR | |
| SO3321 Introduction to Sociology | 3 |
| Elective* | 3 |

15

FOURTH SEMESTER

| | CREDITS |
|------------------------------------|---------|
| Economics Elective†† | 3 |
| MG6666 Principles of Management | 3 |
| EN8011 Public Speaking OR | |
| EN8020 Interpersonal Communication | 3 |
| CT6681 Advanced Data Base | |
| Management Software | 4 |
| Natural Science Elective* | 3/4 |

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* Basic Math, Business Math, Basic Algebra I & Basic Algebra II, Liberal Arts Math I and II do not satisfy Math or elective requirements for Business Programs. Basic Reading, Basic Writing, do not satisfy English or elective requirements for the Business Programs.

** Students with computer keyboarding skills can waive TW6650 Document Processing by passing the computer keyboarding assessment test. Students who choose not to take the assessment test, and those assessed with low keyboarding skills must take this course in their first semester.

*** Prerequisite: A grade of C or better in Introductory Accounting I

† Prerequisite: AC6611 Introductory Accounting II

†† Prerequisite: BU4400, Introduction to Business

††† NOTE: Transfer students should take EC3322 Micro-Economics to receive transfer credit; non-transfer students can take EC3652 Survey of Economics.



BUSINESS MANAGEMENT:

Entrepreneurship Option

The associate in science degree Business Management: Entrepreneurship Option program offers Business Management majors the opportunity to focus on the entrepreneurial aspects of business, as they pursue studies in the traditional business disciplines. The program provides instruction in the entrepreneurial process of evaluation, planning, resourcing, and management. 60/64 credit hours are required for graduation.

| FIRST SEMESTER | CREDITS |
|--|----------------|
| EN4401 English Composition I | 3 |
| AC6610 Introductory Accounting I | 3 |
| Mathematics Elective+† | 3 |
| BU4400 Introduction to Business | 3 |
| CT6630 Computer Applications | 3 |
| TW6650 Document Processing++ | 3 |
| | 15/18 |
| SECOND SEMESTER | CREDITS |
| EN4402 English Composition II | 3 |
| AC6611 Introductory Accounting II* | 3 |
| Mathematics Elective+† | 3 |
| MK6678 Principles of Marketing** | 3 |
| BU4450 Introduction to Entrepreneurship | 3 |
| | 15 |
| THIRD SEMESTER | CREDITS |
| MK6685 Marketing Entrepreneurial Ventures*** | 3 |
| LW6651 Business Law I | 3 |
| FI3652 Business Finance† | 3 |
| PS1101 Introduction to Psychology+++ OR | |
| SO3321 Introduction to Sociology+++ | 3 |
| Economics Elective | 3 |
| | 15 |
| FOURTH SEMESTER | CREDITS |
| FI3655 Planning/Finance for Entrepreneurs†† | 3 |
| EC3652 Survey of Economics | 3 |
| PS1101 Introduction to Psychology+++OR | |
| SO3321 Introduction to Sociology+++ | 3 |
| Natural Science Elective | 3/4 |
| CI4401 Career Internship I OR | |
| Business Elective††† | 3 |
| | 15/16 |

+ Basic Math, Business Math, Basic Algebra I & Basic Algebra II, Liberal Arts Math I and II do not satisfy Math or elective requirements for Business Programs.

++ Students with computer keyboarding skills can waive Document Processing by passing the computer keyboarding assessment test. Students who choose not to take the assessment test, and those assessed with low keyboarding skills must take this course in their first semester.

+++ SO3324 Cultural Anthropology can be substituted for either Introduction to Psychology or Introduction to Sociology.

* Prerequisite: A grade of C or better in AC6610 Introductory Accounting

** Prerequisite: BU4400 Introduction to Business

*** Prerequisite: A grade of C or better in MK6678 Principles of Marketing and BU4450 Introduction to Entrepreneurship

**** NOTE: Transfer students should take EC3322 Micro-Economics to receive transfer credit, non-transfer students can take EC3652 Survey of Economics

† Prerequisite: AC6611 Introductory Accounting II

†† Prerequisite: A grade of C or better in BU4450 Introduction to Entrepreneurship

††† Recommended Business Electives: AC6682 Tax Accounting (prerequisite AC6611), BU4420 International Business, LW6653 International Business Law (prerequisite LW6651), MK6681 Salesmanship, MK6688 Consumer Decision Making, MG6679 Advertising, SL6682 Business Communications

BUSINESS MANAGEMENT:

Healthcare Practice Management Option

The associate in science degree program in Business Management: Healthcare Practice Management option is designed specifically for individuals with prior experience in a health care occupation. It provides them with an opportunity to develop business management skills for positions within medical practice management. Candidates for this program are expected to have substantial experience in health care environments and desire career ladder advancement into management within a medical practice or other health care facility. 63/64 credit hours are required for graduation (dependent upon elective options).

FIRST SEMESTER

| | CREDITS |
|--------------------------------------|---------|
| EN4401 English Composition I | 3 |
| AC6610 Introductory Accounting I | 3 |
| Mathematics Elective* | 3 |
| BU4400 Introduction to Business | 3 |
| CT6630 Computer Applications | 3 |
| PS1101 Introduction to Psychology OR | |
| SO3321 Introduction to Sociology*** | 3 |
| | 18 |

SECOND SEMESTER

| | CREDITS |
|--------------------------------------|---------|
| EN4402 English Composition II | 3 |
| AC6611 Introductory Accounting II | 3 |
| Medical Administration Elective** | 3/5 |
| Mathematics Elective* | 3 |
| PS1101 Introduction to Psychology OR | |
| SO3321 Introduction to Sociology*** | 3 |
| | 15/17 |

THIRD SEMESTER

| | CREDITS |
|--|---------|
| EN8020 Interpersonal Communications OR | |
| EN8011 Public Speaking | 3 |
| MG6666 Principles of Management | 3 |
| LW6651 Business Law I | 3 |
| Science elective† | 3/4 |
| MG6676 Human Resources Management | 3 |
| | 15/16 |

FOURTH SEMESTER

| | CREDITS |
|--|---------|
| BU4410 Healthcare Practice Seminar | 3 |
| BU4415 Practice Management Practicum | 3 |
| Economics Elective†† | 3 |
| MR7701 Coding & Classification for Medical Billing††† | 3 |
| Science Elective† | 3/4 |
| | 15/16 |

* Basic Math and Basic Algebra I & Basic Algebra II; Liberal Arts Math I & II, and Business Math do not satisfy Math Elective requirements of business degree programs.

** Medical Administration electives include: MS1015 Fundamentals of Medical Assisting Administrative, MR7702 Medical Billing Administration, SL6680 Medical Office Administration

*** SO3324 Cultural Anthropology can be substituted for either Introduction to Psychology or Introduction to Sociology.

† Science electives include Integrated Science I & II, Anatomy & Physiology I & II.

†† NOTE: To receive transfer credit students should take EC3322 Micro-Economics, non-transfer students can take EC3652 Survey of Economics

††† Prerequisite skills for MR7701 must be met.

BUSINESS MANAGEMENT: Hospitality & Tourism Option

The associate in science degree program in Business Management: Hospitality and Tourism option surveys the hospitality and tourism industry and gives a student a strong foundation in general business and liberal arts. Graduates are prepared for employment in the hospitality industry in their chosen area of interest. Elective options provide the opportunity to customize the course of study to meet the student's specific educational goals. Course work consists of a strong business core, liberal arts courses and an international perspective. 63/64 credit hours are required for graduation.

| FIRST SEMESTER | CREDITS |
|--|---------|
| EN4401 English Composition I | 3 |
| BU4405 Introduction to Hospitality & Tourism | 3 |
| CT6630 Computer Applications | 3 |
| AC6610 Introductory Accounting I | 3 |
| LA Elective* | 3 |
| | 15 |
| SECOND SEMESTER | CREDITS |
| EN4402 English Composition II | 3 |
| AC6611 Introductory Accounting II | 3 |
| Category I Elective** | 3 |
| MA5615 College Algebra | 3 |
| PS1651 Organizational Behavior | 3 |
| | 15 |
| THIRD SEMESTER | CREDITS |
| MK6672 Marketing for Hospitality & Tourism | 3 |
| LW6651 Business Law I | 3 |
| EC3322 Microeconomics | 3 |
| Category II elective† | 3 |
| EN8011 Public Speaking OR | |
| EN8020 Interpersonal Communications | 3 |
| Science Elective *** | 3/4 |
| | 18/19 |
| FOURTH SEMESTER | CREDITS |
| MG6671 Meeting & Convention Management | 3 |
| Category II elective† | 3 |
| SO3321 Introduction to Sociology OR | |
| SO3324 Cultural Anthropology | 3 |
| CO4401 Cooperative Education I | 3 |
| Business Elective ♦ | 3 |
| | 15 |

Note: This program contains two areas of focus – Hospitality and Travel. Courses specific to each area are listed below.

HOSPITALITY FOCUS

* Liberal Arts Elective: Choose any.

** Category I Elective: MG6690 Introduction to Management Information

*** Science Elective: Hotel & Restaurant focus must take BU5540/41 Human Nutrition & Health, Lab optional. Students transferring to a 4-year institution should take the lab. Many will only accept a science with lab included.

† Category II Elective: HR6615 Hotel Operations & Organization Management, HR6630 Food & Beverage Management, HR6635 Front Office Procedures, or other Hospitality & Tourism elective opportunities. Note: these electives do not run every semester.

F Business Elective: Any course in the Business Division, excluding the following: MK6678, BU4400. If HR6615 is taken, MG6666 is excluded.

TRAVEL FOCUS

* Liberal Arts Elective: GE9511 Introduction to Geography recommended.

** Category I Elective: TL1010 Reservation & Ticketing I.

*** Science Elective: Should consider an earth science.

† Category II Elective: Both TL1020 Reservation & Ticketing II, TL1015 International & Domestic destinations.

♦ Business Elective: Any course in the Business Division, excluding the following: MK6678, BU4400. If HR6615 is taken, MG6666 is excluded.

BUSINESS MANAGEMENT:

Total Quality Management Option

The associate in science degree program in Business Management: Total Quality Management option prepares students to enter the management field with application knowledge of the latest concepts in workforce utilization, company wide management of process/product/service quality, customer service, productivity and continuous process improvement. 69/73 credit hours are required for graduation.

FIRST SEMESTER CREDITS

| | | |
|--------|--|---|
| EN4401 | English Composition I | 3 |
| AC6610 | Introductory Accounting I | 3 |
| | Mathematics Elective* | 3 |
| BU4400 | Introduction to Business | 3 |
| MG6620 | Introduction to Total Quality Management | 3 |
| TW6650 | Document Processing** | 3 |

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SECOND SEMESTER CREDITS

| | | |
|--------|----------------------------------|---|
| EN4402 | English Composition II | 3 |
| AC6611 | Introductory Accounting II*** | 3 |
| CT6630 | Computer Applications | 3 |
| | Mathematics Elective* | 3 |
| PS1101 | Introduction to Psychology OR | |
| SO3321 | Introduction to Sociology | 3 |
| MG6625 | Planning for Total Quality Mgmt. | 3 |

18

THIRD SEMESTER CREDITS

| | | |
|--------|-------------------------------------|---|
| FI3652 | Business Finance† | 3 |
| MK6678 | Marketing†† | 3 |
| EN8011 | Public Speaking OR | |
| EN8020 | Interpersonal Communication | 3 |
| BU4430 | Business Software Integration**** | 3 |
| MG6630 | Management of Total Quality Systems | 3 |
| MG6633 | Process Control & Improvement | 3 |

18

FOURTH SEMESTER CREDITS

| | | |
|--------|-------------------------------|-----|
| | Economics Elective††† | 3 |
| MG6666 | Principles of Management | 3 |
| LW6651 | Business Law I | 3 |
| MG6635 | Management of Product Design | 3 |
| PS1101 | Introduction to Psychology OR | 3 |
| SO3321 | Introduction to Sociology | |
| | Natural Science Elective* | 3/4 |

18/19

* Basic Math, Basic Algebra I & Basic Algebra II, Basic Reading, Basic Writing, College Reading and other developmental courses do not satisfy Math, Business, Liberal Arts, Natural Science, or elective requirements.

** Students with computer keyboarding skills can waive TW6650 Document Processing by passing the computer keyboarding assessment test. Students who choose not to take the assessment test, and those assessed with low keyboarding skills must take this course in their first semester.

*** Prerequisite: A grade of C or better in Introductory Accounting I

****Prerequisite: CT6630 Computer Applications

† Prerequisite: AC6611 Introductory Accounting II

†† Prerequisite: BU4400 Introduction to Business

††† NOTE: Transfer students should take EC3322 Micro-Economics to receive transfer credit; non-transfer students can take EC3652 Survey of Economics.

BUSINESS TRANSFER†

The associate in science degree program in Business Transfer is designed for students planning to transfer to a four-year institution after completing the associate degree program. It provides study of basic liberal arts and business administration courses to provide a strong background for further study towards the bachelor's degree. 62/65 credit hours are required for graduation.

| | CREDITS |
|---|---------|
| FIRST SEMESTER | |
| EN4401 English Composition I | 3 |
| AC6610 Introductory Accounting I | 3 |
| MA5615 College Algebra* OR | 3 |
| MA5675 Calculus I for Business/Social/Life Sciences | |
| CT6630 Computer Applications | 3 |
| PS1101 Introduction to Psychology OR | |
| SO3321 Introduction to Sociology | 3 |
| TW6650 Document Processing** | 3 |
| | 15/18 |
| SECOND SEMESTER | CREDITS |
| EN4402 English Composition II | 3 |
| AC6611 Introductory Accounting II*** | 3 |
| BU4430 Business Software Integration | 3 |
| EN8011 Public Speaking OR | |
| EN8020 Interpersonal Communication | 3 |
| PS1101 Introduction to Psychology OR | |
| SO3321 Introduction to Sociology | 3 |
| | 15 |
| THIRD SEMESTER | CREDITS |
| EC3322 Micro Economics | 3 |
| Natural Science | 4 |
| Elective* | 3 |
| Elective* | 3 |
| Elective* | 3 |
| | 16 |
| FOURTH SEMESTER | CREDITS |
| EC3323 Macro Economics | 3 |
| Natural Science | 4 |
| Elective* | 3 |
| Elective* | 3 |
| Elective* | 3 |
| | 16 |

Natural Science Requirement: Two 4-credit courses in natural science are recommended.

Mathematics Requirement: Since acceptable transfer courses vary among four year colleges, students should choose courses in accordance with the specific requirement of the college to which they are seeking admission. It may be necessary for some students to take more than the required two courses in mathematics since courses in Calculus for Business I & II are required for admission by some colleges.

Electives: A wide variety of electives is available to fill the requirements of specific colleges in regard to transfer credits. Students are advised to contact the college to which they are seeking transfer to determine courses that should be taken at Northern Essex Community College. Recommended in many instances would be courses in history and government, humanities social sciences and mathematics. Many four year schools will also accept additional courses in Business Administration to satisfy their general elective requirements. Co-op I and II are not transferable electives.

* Basic Math, Basic Algebra I and Basic Algebra II, Basic Reading, Basic Writing, College Reading and other developmental courses do not satisfy Math, Business, Liberal Arts, Natural Science, or elective requirements.

** Students with computer keyboarding skills can waive TW6650 Document Processing by passing the computer keyboarding assessment test. Students who choose not to take the assessment test, and those assessed with low keyboarding skills must take this course in their first semester.

*** Prerequisite: A grade of C or better in Introductory Accounting I

† Consult an advisor for Joint Admissions requirements.

COMPUTER & INFORMATION SCIENCES: Applications & Operations Specialist Option

This associate in science degree option has been designed to serve the needs of the career-oriented student who wishes to find employment as an application and/or operations specialist. This program provides training in hardware, applications software, the Internet and web page development, computer networks, and operating systems. A total of 64 credit hours are required for graduation. **Program prerequisites:** CT3310 Computers for Beginners or equivalent skills, TW6650 Document Processing or equivalent skills and MA0040 Basic Algebra II or equivalent.

FIRST SEMESTER

| | CREDITS |
|---|---------|
| CT6610 Intro to Programming & Problem Solving | 4 |
| CT6626 Introduction to Information Processing | 4 |
| CT6630 Computer Applications* | 3 |
| EN4401 English Composition I | 3 |
| Mathematics Elective** | 3/4 |
| | 17/18 |

SECOND SEMESTER

| | CREDITS |
|---|---------|
| CT5501 Personal Computer Maintenance/Repair | 3 |
| CT6654 The Internet & Web Page Development (HTML) | 3 |
| CT6632 Data Management Applications* | 3 |
| CT6641 Introduction to Operating Systems | 4 |
| Category Elective*** | 3/4 |
| | 16/17 |

THIRD SEMESTER

| | CREDITS |
|------------------------------------|---------|
| EN4402 English Composition II | 3 |
| Category Elective*** | 3/4 |
| Mathematics Elective** | 3/4 |
| Programming Elective*** | 4 |
| Social Science/Humanities Elective | 3 |
| | 16/18 |

FOURTH SEMESTER

| | CREDITS |
|-----------------------------------|---------|
| CO4401 Cooperative Education I OR | 3/4 |
| Category Elective **** | 3/4 |
| Category Elective **** | 3/4 |
| Humanities Elective | 3 |
| Social Science Elective | 3 |
| Elective | 3 |
| | 15/17 |

* Students without computer skills should take CT3310 Computers for Beginners; students with computer applications background should choose the appropriate level course from the Computer Application Sequence listed here: CT6630 Computer Applications; CT6642 Integrated Computer Applications; CT6632 Data Management Applications; CT6681 Advanced Database Management Software

** Math chart starting at the level of MA5615 College Algebra or MA5621 College Algebra & Trigonometry. It is suggested that MA5614 Introduction to Discrete Math or MA5506 Statistics be taken as one of the student's mathematics electives.

*** CT6620 Programming I OR CT6665 Visual Basic Programming

**** Category Electives: Should be selected from one of the Options listed or the Category I electives from the Computer Applications Certificate.

NOTE: Electives may not include any developmental courses such as Basic Math, Basic Algebra I & Basic Algebra II, Basic Reading or Basic Writing.

Program Category Electives & Options

COMPUTER APPLICATION OPTION

Required:

- CT6642 Integrated Computer Applications
- CT6681 Advanced Database Management Software

Choice of two of the following:

- CT6623 Current Topics in Computer Science
- CT6688 C++ Programming Language
- CT6640 Programming II
- CT6645 Introduction to Computer Networks
- CT6646 Computer Networks II
- CT6655 Internet Languages & Web Authoring Techniques I
- CT6657 Internet Languages & Web Authoring Techniques II
- CT6670 Introduction to CAD/CAM
- CT6601 Fundamentals of Digital Logic

Note: Upon completion of this option the **Computer Application Certificate** can be awarded.

WEB PAGE DESIGN OPTION

Required:

- CT6656 Internet Languages & Web Authoring Techniques I
- CT6620 Programming I

Choice of three of the following:

- CT6623 Current Topics in Computer Science (appropriate topics only)
- CT6657 Internet Languages & Web Authoring Techniques II
- CT6681 Advanced Database Management Software
- CT6640 Programming II
- CT6646 Computer Networks II

One Humanities & Elective in the fourth semester must be chosen from the following:

- FA7122 Publication Design
- FA7130 Animation

Any Fine Arts (FA) special topic courses that are appropriate. (A list will be provided each semester.)

Note: Upon completion of this option the **Web Page Design & Development Certificate** can be awarded.

COMPUTER NETWORKING & OPERATIONS OPTION

Required:

- CT6645 Introduction to Computer Networks
- CT6646 Computer Networks II
- CN6647 Network Operating Systems I

Choice of one of the following:

- CN6648 Network Operating Systems II
- CT6601 Fundamentals of Digital Logic
- CT6623 Current Topics in Computer Science
- CT6642 Integrated Computer Applications
- CT6656 Internet Languages & Web Authoring Techniques I
- CT6681 Advanced Database Management Software

Note: Upon completion of this option the **Computer Networking Certificate** can be awarded.

COMPUTER SERVICE SPECIALIST OPTION

Required:

- CT6601 Fundamentals of Digital Logic
- CT6603 Digital Logic Laboratory
- CN5502 Advanced PC Maintenance & Repair

Choice of two of the following:

- CN6647 Network Operating Systems I
- CN6648 Network Operating Systems II
- CT6645 Introduction to Computer Networks

Mathematics Elective:

MA5621 College Algebra & Trigonometry

Note: Upon completion of this option the **Computer Service Specialist Certificate** can be awarded.

COMPUTER & INFORMATION SCIENCES: Programming Option

The associate in science degree program in Computer and Information Sciences: Programming Option is designed to serve the needs of a variety of students whose goals may vary from employment after graduation to transferring to a four year college majoring in computer science or computer information systems (CIS). Category electives allow students to plan their future by focusing on one of four career objectives: computer science transfer, CIS transfer or employment in the business or technical programming career paths. Students should consult with their faculty advisor to plan courses. 66 credit hours are required for graduation. **Program prerequisite:** TW6650 Document Processing or equivalent skills and two years high school algebra or MA0040 Basic Algebra II or equivalent.

| FIRST SEMESTER | | CREDITS |
|-----------------|---|--------------------|
| CT6620 | Programming I | 4 |
| CT6632 | Data Management Applications OR Applications Sequence Elective* | 3 |
| CT6654 | The Internet & Web Page Develop. (HTML) | 3 |
| EN4401 | English Composition I Math Elective*** | 3/4 |
| | | 16 |
| SECOND SEMESTER | | CREDITS |
| CT6623 | Current Topics in Computer Science Category Elective** | 4 3/4 |
| EN4402 | English Composition II Math Elective*** Humanities/Social Science Elective | 3 3/4 3 |
| | | 16/18 |
| THIRD SEMESTER | | CREDITS |
| CT6640 | Programming II Programming Elective Category Elective** | 4 4 3/4 |
| MA5614 | Intro to Discrete Math Humanities Elective | 3 3 |
| | | 17/19 |
| FOURTH SEMESTER | | CREDITS |
| CT6655 | Programming III | 4 |
| CT6681 | Adv. Database Management Software Category Elective** Social Science Elective Elective | 4 3/4 3 3 |
| | | 17/18 |

* Must be selected from the Computer Application Sequence listed and may not include CT6630 Computer Applications.

** Category Electives: See the list of requirements for each option. Electives may include upper level math, CIS, Engineering, Electronics, or Natural Science courses. Electives may not include any developmental courses such as Basic Math, Basic Algebra, Basic Reading or Basic Writing.

*** Math chart starting at the level of MA5621 College Algebra and Trigonometry or MA5615 College Algebra depending on the option you have selected.

Technical Writing is highly recommended as a humanities or general elective.

Students wishing to transfer to Massachusetts state colleges should have two social science electives: Western Civilization I and Western Civilization II, one humanities elective and a minimum grade of C in all programming courses.

COMPUTER SCIENCE (CS) TRANSFER:

Category Electives

PI5623 Engineering Physics I and

PI5624 Engineering Physics II

Upper level math courses (Calculus III, Differential Equations)

Math Electives

MA5690 Calculus I and MA5692 Calculus II

Programming or Category Electives

CT6688 C++ Programming Language

CT6665 Visual Basic Programming

Web Page Programming Sequence (see below)

COMPUTER & INFORMATION SYSTEMS (CIS) TRANSFER:

Category Electives

Computer Application Sequence (see below)

AC6610 Accounting I and AC6611 Accounting II

Math Electives

MA5621 College Algebra and Trigonometry and

MA5622 Advanced Algebra and Trigonometry OR

MA5615 College Algebra and

MA5506 Statistics OR

MA5673 Quantitative Methods for B/S/L OR

MA5675 Calculus I for B/S/L

Programming or Category Electives

CT6665 Visual Basic Programming

CT6688 C++ Programming Language

Web Page Programming Sequence (see below)

TECHNICAL PROGRAMMING:

Category Electives

Computer Application Sequence (listed below)

CO4401 Cooperative Education I

Upper level math courses (Calculus I, II, III)

Math Electives

MA5621 College Algebra & Trigonometry and

MA5622 Advanced Algebra & Trigonometry

Programming or Category Electives

CT6688 C++ Programming Language

CT6665 Visual Basic Programming

Web Page Programming Sequence (see below)

BUSINESS PROGRAMMING:

Category Electives

Computer Application Sequence (listed below)

AC6610 Accounting I and AC6611 Accounting II

CO4401 Cooperative Education I

Math Electives

MA5621 College Algebra and Trigonometry and

MA5622 Advanced Algebra and Trigonometry OR

MA5615 College Algebra and

MA5506 Statistics OR

MA5673 Quantitative Methods for B/S/L OR

MA5675 Calculus I for B/S/L

Programming or Category Electives

CT6665 Visual Basic Programming

CT6688 C++ Programming Language

Web Page Programming Sequence (see below)

COURSE SEQUENCES:

Computer Application Sequence

CT6630 Computer Applications

CT6642 Integrated Computer Applications

CT6632 Data Management Applications

CT6681 Advanced Database Management Software

Web Page Programming Sequence

CT6654 The Internet & Web Page Development (HTML)

CT6620 Programming I

CT6656 Internet Language & Web Authoring Techniques I

CT6657 Internet Language & Web Authoring Techniques II

CRIMINAL JUSTICE

The associate in science degree program in Criminal Justice describes and analyzes the various aspects of the criminal justice system. The curriculum is designed to take a systems approach in understanding the crime problem in the U.S. The program is structured to prepare students for professional careers, whether they are pre-service or already working in the criminal justice field. It is recognized that a majority of criminal justice students continue their criminal justice education at four-year institutions. Consequently, the curriculum has a broad, academic orientation, facilitating transfer to four year institutions. 63 to 66 credit hours are required for graduation. See a representative in the Office of Admission for additional admissions criteria for this program.

| FIRST SEMESTER | | CREDITS |
|-----------------------|----------------------------------|----------------|
| EN4401 | English Composition I | 3 |
| | Math Elective* | 3/4 |
| SO3321 | Introduction to Sociology | 3 |
| PH1150 | Practical Logic | 3 |
| CJ3603 | Introduction to Criminal Justice | 3 |
| | | 15/16 |

| SECOND SEMESTER | | CREDITS |
|------------------------|---------------------------------------|----------------|
| EN4402 | English Composition II | 3 |
| GV3310 | American Government & Politics | 3 |
| SO3353 | Introduction to Criminology | 3 |
| CJ3607 | Functions of Police in Modern Society | 3 |
| CJ3610 | Introduction to Security | 3 |
| | | 15 |

| THIRD SEMESTER | | CREDITS |
|-----------------------|--|----------------|
| CT6630 | Computer Applications | 3 |
| | Elective** | 3 |
| CJ3667 | Crisis Intervention in Criminal Justice System | 3 |
| PS1101 | Introduction to Psychology | 3 |
| CJ3601 | Concepts of Criminal Law | 3 |
| | Natural Science Elective*** | 3/4 |
| | | 18/19 |

| FOURTH SEMESTER | | CREDITS |
|------------------------|-----------------------------|----------------|
| GV3315 | Civil Rights & Liberties | 3 |
| CJ3608 | Introduction to Corrections | 3 |
| CJ3670 | Senior Seminar† OR | |
| CJ3672 | Field Practicum | 3 |
| | Natural Science Elective*** | 3/4 |
| | Elective** | 3 |
| | | 15/16 |

* Basic Math, Basic Algebra I and Basic Algebra II are generally not accepted for transfer or to meet the standards of the Joint Admissions Agreement.

** Transfer students are advised to check requirements of the institution to which they seek to transfer.

***Natural Science Elective: Select courses from the following catalog categories: biology, chemistry, earth sciences or science. Students seeking to transfer require two laboratory science courses (4 credits each) to meet the standards of the Joint Admissions Agreement.

DEAF STUDIES: American Sign Language Option

The associate in science degree in Deaf Studies: American Sign Language Option has been designed to provide students with a broad educational experience, including the balance and diversity of general education and the knowledge and skills of American Sign Language (ASL). Students are provided the opportunity to develop an understanding of American Sign Language, Deaf Culture and the world around them. Graduates will be able to both continue their education at other institutions of higher learning and to gain employment in group homes, sheltered workshops and other facilities providing services for deaf people as the program provides for career exploration within the deaf community and the basic academic preparation for transfer to bachelor degree programs. 63/65 credit hours are required for graduation. **Program prerequisite:** AL1001 Introductory ASL I and AL1002 Introductory ASL II with a 'B' or better or demonstrate comparable skills/knowledge. See a representative in the Office of Admission for additional admissions criteria for this program.

| FIRST SEMESTER | | CREDITS |
|-----------------|--|------------------|
| AL1003 | American Sign Language I | 4 |
| IN1010 | Introduction to the Deaf Community | 3 |
| IN1041 | Introduction to Practicum | 2 |
| EN4401 | English Composition I Science Elective* | 3 3/4 |
| | | 15/16 |
| SECOND SEMESTER | | CREDITS |
| AL2003 | American Sign Language II | 4 |
| IN1030 | Introduction to the Interpreting Field | 3 |
| EN4402 | English Composition II Science Elective* | 3 3/4 |
| | Behavioral Science Elective** | 3 |
| | | 16/17 |
| THIRD SEMESTER | | CREDITS |
| AL3003 | American Sign Language III Elective Elective Math Elective*** | 4 3 3 3 |
| AL3010 | Deaf Literature & ASL Folklore | 3 |
| | | 16 |
| FOURTH SEMESTER | | CREDITS |
| AL4033 | American Sign Language IV & Structure Elective Elective | 4 3 3 |
| SO3361 | Introduction to Deaf Culture | 3 |
| GV3312 | Introduction to Political Science | 3 |
| | | 16 |

* Any Science elective. For transfer to other Colleges/Universities check with the appropriate College/University and/or Program for their requirements.

** SO3321 Introduction to Sociology or SO3324 Cultural Anthropology
 *** MA5520 Liberal Arts Math I, MA5615 College Algebra or higher
 Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

DEAF STUDIES: Sign Language Interpreter Option

The associate in science degree in Deaf Studies: Sign Language Interpreter Option is designed to provide students with a broad educational experience based on a balance and diversity of general education, American Sign Language (ASL) and interpreting courses. Students are provided the opportunity to develop an understanding of the profession of interpreting for deaf and hearing individuals and the knowledge, attitude and skills necessary to function as entry-level professional interpreters. The program also provides for career exploration within the deaf community and the basic academic preparation for possible transfer to bachelor degree programs. 65/67 credit hours are required for graduation. **Program prerequisite:** AL1001 Introductory ASL I and AL1002 Introductory ASL II with a 'B' or better or demonstrate comparable skills/knowledge. See a representative in the Office of Admission for additional admissions criteria for this program.

| FIRST SEMESTER | | CREDITS |
|-----------------|---|---------------|
| AL1003 | American Sign Language I | 4 |
| IN1010 | Introduction to the Deaf Community | 3 |
| EN4401 | English Composition I Science Elective* Behavioral Science Elective** | 3 3/4 3 |
| | | 16/17 |
| SECOND SEMESTER | | CREDITS |
| AL2003 | American Sign Language II | 4 |
| IN1030 | Introduction to the Interpreting Field | 3 |
| IN1041 | Introduction to Practicum | 2 |
| EN4402 | English Composition II Science Elective* | 3 3/4 |
| | | 15/16 |
| THIRD SEMESTER | | CREDITS |
| AL3003 | American Sign Language III | 4 |
| IN2029 | Interpreting | 4 |
| IN2039 | Practicum I Math Elective*** | 3 |
| AL3010 | Deaf Literature & ASL Folklore | 3 |
| | | 17 |
| FOURTH SEMESTER | | CREDITS |
| AL4003 | American Sign Language IV & Structure | 4 |
| IN2033 | Advanced Interpreting | 4 |
| IN2041 | Practicum II | 3 |
| S03361 | Introduction to Deaf Culture | 3 |
| GV3312 | Introduction to Political Science | 3 |
| | | 17 |

* Any Science elective. For transfer to other Colleges/Universities check with the appropriate College/University and/or Program for their requirements.

** SO3321 Introduction to Sociology or SO3324 Cultural Anthropology
 *** MA5520 Liberal Arts Math I, MA5615 College Algebra or higher
 Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

EARLY CHILDHOOD EDUCATION

The associate in science degree program in Early Childhood Education is career oriented and trains students for a professional role in early childhood education. How children grow, develop and learn will become more meaningful through course work, directed observation and the study of the young child as an individual and as he/she functions in a variety of group settings. An integral part of this program is, therefore, the practicum placement which allows the student to apply theory and new skills, under guidance and supervision, in a variety of classrooms and educational programs. The program also provides the foundation for further study at a four year college. 66/68 credit hours are required for graduation. **See a representative in the Office of Admission for additional admissions criteria for this program.**

| FIRST SEMESTER | CREDITS |
|--|----------------|
| EN4401 English Composition I | 3 |
| PS1101 Introduction to Psychology | 3 |
| BI5510 Human Biology/Natural Science Elective | 3/4 |
| CC2230 ECE: Theory & Practice | 4 |
| CC2244 Enhancing Creativity in EC Curriculum | 3 |
| EN8011 Public Speaking | 3 |
| | 19/20 |
| SECOND SEMESTER | CREDITS |
| EN4402 English Composition II | 3 |
| PS1151 Child Psychology | 3 |
| CC2312 Practicum I | 3 |
| CC2245 Language/Reading Development in EC Natural Science Elective | 3/4 |
| | 15/16 |
| THIRD SEMESTER | CREDITS |
| CC2353 Practicum II | 4 |
| PS2112 Problems of EC | 3 |
| Humanities Elective* | 3 |
| Math Requirement*** | 3 |
| CC2240 Expressive Learning Activities in Early Childhood Curriculum | 3 |
| | 16 |
| FOURTH SEMESTER | CREDITS |
| CC2264 Seminar in Philosophy ECE | 3 |
| CC2354 Practicum III | 4 |
| GV3310 American Government & Politics | 3 |
| Elective** | 3 |
| CC2260 Math/Science for EC Curriculum | 3 |
| | 16 |

* Humanities electives include foreign languages, philosophy, art, music, literature, religion, theatre, dance, photography.

** Persons who wish to transfer to other colleges after graduation should elect a course which satisfies requirements of those colleges.

*** Specific college level math course to be determined by students in consultation with their advisor.

Students must maintain a grade of C or above in all CC and/or ED prefixed courses to proceed to the next semester's sequence in Early Childhood Education. Students whose grades fall below this level may continue only with the permission of the Early Childhood Coordinator.

Health: All students entering the Program must submit a report of a medical examination by a physician and documentation of a completed Mantoux (tuberculosis) test and MMR inoculation prior to beginning the program.

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

ELECTRONIC TECHNOLOGY

The associate in science degree program in Electronic Technology is designed primarily to prepare students for employment (often as an engineering assistant) with immediate marketable skills in electronic techniques. Heavy emphasis is put on use of state-of-the-art devices and laboratory equipment, and the preparing of complete, analytical laboratory reports. A minimum of 68 credit hours are required for graduation. Two years of high school algebra, geometry and trigonometry helpful, but not required.

FIRST SEMESTER

| | | CREDITS |
|--------|--------------------------------|---------|
| EN4401 | English Composition I | 3 |
| MA5621 | College Algebra & Trigonometry | 4 |
| ET6611 | Circuit Analysis I | 4 |
| CT6601 | Fundamentals of Digital Logic | 3 |
| CT6603 | Digital Logic Laboratory | 1 |
| TW6600 | Keyboarding for Computers | 1 |
| | | 16 |

SECOND SEMESTER

| | | CREDITS |
|--------|--|---------|
| MA5622 | Advanced Algebra & Trigonometry | 4 |
| ET6612 | Circuit Analysis II | 4 |
| ET6672 | Electronics I | 5 |
| ET6690 | Microcomputers* OR Technical Elective** | 3/4 |
| | | 16/17 |

THIRD SEMESTER

| | | CREDITS |
|--------|------------------------------------|---------|
| EN4402 | English Composition II | 3 |
| PI5621 | Applied Physics I | 4 |
| ET6673 | Electronics II | 5 |
| ET6682 | Digital Electronics | 4 |
| | Humanities/Social Science Elective | 3 |
| | | 19 |

FOURTH SEMESTER

| | | CREDITS |
|--------|--|---------|
| PI5622 | Applied Physics II | 4 |
| ET6690 | Microcomputers* OR Technical Elective** | 3/4 |
| ET6684 | Electronic Communication Systems | 4 |
| ET6683 | Digital Communications | 3 |
| | Humanities/Social Science Elective | 3 |
| | | 17/18 |

* ET6690 Microcomputers is required for graduation.

** Technical Electives:

CT5501 PC Maintenance & Repair

CT6630 Computer Applications

CT6632 Data Management Applications

CT6682 Engineering Computer Applications

ELECTRONIC TECHNOLOGY:

Biomedical Option

The associate in science degree program in Electronic Technology Biomedical Option is a career program designed to train students for employment with immediate marketable skills as technicians in biomedical electronic technology. Emphasis is on use of electronic devices and laboratory equipment and the maintenance and repair of medical electronics equipment. 63 credit hours are required for graduation. Two years of high school algebra, geometry and trigonometry helpful, but not required.

FIRST SEMESTER

| | | CREDITS |
|--------|---|---------|
| EN4401 | English Composition I | 3 |
| MA5621 | College Algebra & Trigonometry | 4 |
| ET6611 | Circuit Analysis I | 4 |
| CT6601 | Fundamentals of Digital Logic | 3 |
| CT6603 | Digital Logic Laboratory | 1 |
| ET6010 | Intro to Medical Electronics & Clinical Safety | 1 |
| | | 16 |

SECOND SEMESTER

| | | CREDITS |
|--------|---------------------------------|---------|
| MA5622 | Advanced Algebra & Trigonometry | 4 |
| ET6612 | Circuit Analysis II | 4 |
| ET6672 | Electronics I* | 5 |
| BI5510 | Human Biology | 3 |

THIRD SEMESTER

| | | CREDITS |
|--------|------------------------------------|---------|
| EN4402 | English Composition II | 3 |
| ET6673 | Electronics II | 5 |
| ET6040 | Medical Equipment Troubleshooting | 3 |
| TW6600 | Keyboarding for Computers | 1 |
| | Humanities/Social Science Elective | 3 |
| | | 15 |

FOURTH SEMESTER

| | | CREDITS |
|--------|------------------------------------|---------|
| ET6690 | Microcomputers | 4 |
| CO4401 | Cooperative Education I** | 3 |
| CT5501 | PC Maintenance & Repair | 3 |
| | Category Elective*** | 3/4 |
| | Humanities/Social Science Elective | 3 |
| | | 16/17 |

* ET6030 Medical Electronics Systems Operation completed with a minimum grade of B may be substituted for ET6672 with prior permission of the Chairperson of the Electronic Technology Department.

** The student is responsible for transportation to and from the cooperative education site. On occasion, off or onsite student conferences may be scheduled. Students are expected to meet with the health requirements of the cooperative education site.

Liability Insurance is required at a number of sites. The insurance is to be paid prior to the beginning of the cooperative education experience. Students are required to contact the Cooperative Education office by the end of the first semester to initiate their experience.

*** Category Electives:

CT6630 Computer Applications

CT6632 Data Management Applications

CT6645 Intro to Computer Networks

ELECTRONIC TECHNOLOGY: Computer Systems Option

The associate in science degree option in Computer Systems is a career program designed to train students for employment as computer technicians. A strong foundation in analog electronics is combined with courses emphasizing digital and computer applications. A minimum of 66 credits are required for graduation. Two years of high school algebra, geometry and trigonometry helpful, but not required.

FIRST SEMESTER

| | CREDITS |
|---------------------------------------|---------|
| EN4401 English Composition I | 3 |
| MA5621 College Algebra & Trigonometry | 4 |
| ET6611 Circuit Analysis I | 4 |
| CT6601 Fundamentals of Digital Logic | 3 |
| CT6603 Digital Logic Laboratory | 1 |
| TW6600 Keyboarding for Computers | 1 |
| | 16 |

SECOND SEMESTER

| | CREDITS |
|--|---------|
| MA5622 Advanced Algebra & Trigonometry | 4 |
| ET6612 Circuit Analysis II | 4 |
| ET6672 Electronics I | 5 |
| CT5501 PC Maintenance & Repair | 3 |
| | 16 |

THIRD SEMESTER

| | CREDITS |
|------------------------------------|---------|
| EN4402 English Composition II | 3 |
| ET6673 Electronics II | 5 |
| ET6682 Digital Electronics | 4 |
| Technical Elective | 3/4 |
| Humanities/Social Science Elective | 3 |
| | 18/19 |

FOURTH SEMESTER

| | CREDITS |
|---|---------|
| ET6690 Microcomputers | 4 |
| ET6684 Electronic Communication Systems | 4 |
| ET6683 Digital Communications | 3 |
| Technical Elective | 3/4 |
| Humanities/Social Science Elective | 3 |
| | 17/18 |

Technical Electives: Both electives must be from the same sequence as listed below.

Network Sequence: CT6645 Introduction to Computer Networks, CT6646 Computer Networks II.

Software Application Sequence: CT6630 Computer Applications, CT6632 Data Management Applications, CT6642 Integrated Computer Applications.

Programming Sequence: CT6620 Programming I and CT6640 Programming II or CT6626 Introduction to Data Processing with BASIC & CT6655 Visual BASIC or CT6620 Programming I & CT6688 C++ Programming Language.

CAD Sequence: ET6601 Engineering Design Graphics, CT6670 Introduction to CAD/CAM, CT6672 Computer Aided Drafting.

ELECTRONIC TECHNOLOGY:

Semiconductor Manufacturing Option

The associate in science degree option in Semiconductor Manufacturing is a career program designed to prepare students for employment as self-sustaining technicians, manufacturing technicians able to use Statistical Quality Control, to make production decisions, to perform preventive maintenance and to repair their own equipment. A strong foundation in electronics is combined with knowledge of physics, chemistry, computers, SQC and oral and written communications. 74 credits are required for graduation. Two years of high school algebra, geometry and trigonometry helpful, but not required.

FIRST SEMESTER

| | CREDITS |
|---------------------------------------|---------|
| EN4401 English Composition I | 3 |
| MA5621 College Algebra & Trigonometry | 4 |
| ET6611 Circuit Analysis I | 4 |
| CT6601 Fundamentals of Digital Logic | 3 |
| CT6603 Digital Logic Laboratory | 1 |
| TW6600 Keyboarding for Computers * | 1 |
| | 16/17 |

SECOND SEMESTER

| | CREDITS |
|--|---------|
| EN4402 English Composition II | 3 |
| MA5622 Advanced Algebra & Trigonometry | 4 |
| ET6612 Circuit Analysis II | 4 |
| ET6672 Electronics I | 5 |
| CT6630 Computer Applications | 3 |
| | 19 |

THIRD SEMESTER

| | CREDITS |
|------------------------------------|---------|
| ET6673 Electronics II | 5 |
| ET6682 Digital Electronics | 4 |
| CT5501 PC Maintenance | 3 |
| PI5621 Applied Physics I | 4 |
| Humanities/Social Science Elective | 3 |
| | 19 |

FOURTH SEMESTER

| | CREDITS |
|------------------------------------|---------|
| ET6690 Microcomputers | 4 |
| PI5622 Applied Physics II | 4 |
| MA5506 Statistics | 3 |
| Technical Elective** | 3/4 |
| Humanities/Social Science Elective | 3 |
| | 17/18 |

SUMMER SEMESTER

| | CREDITS |
|--|---------|
| ET6692 Vacuum Technology | 2 |
| ET6693 Internship in Semiconductor Manufacturing | 1 |
| | 3 |

* Students with basic computer keyboarding skills can waive TW6600 Keyboarding for Computers by presenting evidence of such skills to the Department Chair. Students without these skills must take this course before they take CT6630 Computer Applications.

** Technical Electives: CO4401 Cooperative Education I or CH5503 Intro to Chemistry I or CH5501 General Chemistry I.

ENGINEERING SCIENCE

The associate in science degree program in Engineering Science is designed to prepare an engineering student for transfer to a four-year college or university. A core curriculum has been developed in cooperation with the American Association for Engineering Education and engineering divisions of several four-year institutions. The core curriculum allows the student an opportunity to explore various engineering fields equipping him/her to choose the field of specialization best suited to his/her interests and abilities. The fields of engineering include chemical, industrial, electrical, civil, environmental, and mechanical. A strong background in mathematics is required. A minimum of 69 credit hours are required for graduation. **Program prerequisite:** Two years of algebra; geometry; trigonometry; one year of physics or chemistry.

FIRST SEMESTER

| | CREDITS |
|------------------------------------|-----------|
| EN4401 English Composition I | 3 |
| MA5690 Calculus I | 4 |
| Chemistry Elective* | 4 |
| ET6601 Engineering Design Graphics | 2 |
| Programming Elective** | 4 |
| | 17 |

SECOND SEMESTER

| | CREDITS |
|-------------------------------|-----------|
| EN4402 English Composition II | 3 |
| MA5692 Calculus II | 4 |
| PI5623 Engineering Physics I | 4 |
| Chemistry Elective* OR | |
| Technical Elective† | 4 |
| Communications Elective†† | 3 |
| | 18 |

THIRD SEMESTER

| | CREDITS |
|---------------------------------------|--------------|
| MA5693 Calculus III | 4 |
| PI5624 Engineering Physics II††† | 4 |
| ET6651 Engineering Mechanics I | 3 |
| Technical Elective† | 3/4 |
| Humanities/Social Science Elective*** | 3 |
| | 17/18 |

FOURTH SEMESTER

| | CREDITS |
|---------------------------------------|--------------|
| PI5651 Engineering Physics III††† | 4 |
| Technical Elective† | 4 |
| Free Elective | 3/4 |
| Humanities/Social Science Elective*** | 3 |
| Social Science Elective*** | 3 |
| | 17/18 |

* This elective can be either the Introductory Chemistry sequence (CH5503, CH5504) or the General Chemistry sequence (CH5501, CH5502) depending on the background needs of the student and the requirements of the branch of engineering into which the student wishes to transfer. Students transferring to University of Massachusetts Lowell in either Mechanical or Electrical/Computer Engineering are not required to take a second chemistry elective.

** This elective can be either CT6620 Programming I or CT6682 Computer Applications in Engineering & Technology. See an Engineering Department faculty member before choosing a programming elective.

*** **Humanities/Social Science Electives:** Either EC3322 Micro Economics or EC3323 Macro Economics or both may be used to satisfy part of this requirement. During the first semester the student should contact the college to which he/she plans to transfer and then select both technical and general electives to fulfill transfer goals.

† **Technical Electives:** Proposed technical electives from outside the lists below will be considered, but must be approved by the Chairperson, Department of Engineering Science.

Suggested Technical Electives for the various engineering branches (this list is not to be considered complete):

Civil Engineering: Micro/Macro Economics, Surveying I & II, Differential Equations, Statistics, Strength of Materials, Engineering Mechanics II - Dynamics, Thermodynamics, Circuit Analysis I, Programming I, Computer Applications in Engineering & Technology.

Electronic/Electrical Engineering: Micro/Macro Economics, Differential Equations, Fundamentals of Digital Logic, Digital Logic Lab, Networks I & II.

Mechanical Engineering: Micro/Macro Economics, Differential Equations, Engineering Mechanics II- Dynamics, Strength of Materials, Thermodynamics, Computer Aided Drafting.

Environmental Engineering: Micro/Macro Economics, Differential Equations, Engineering Mechanics II-Dynamics, Strength of Materials, Thermodynamics, Introductory Biology, Microbiology.

Chemical Engineering: Micro/Macro Economics, Differential Equations, Thermodynamics, Organic Chemistry.

†† The Communication Elective is considered to be any of the English offerings (courses with an EN prefix). Highly recommended are EN8011 Public Speaking and EN8020 Interpersonal Communications. Students intending to transfer to the University of Massachusetts Lowell should select a literature course.

††† An appropriate technical elective may be substituted for PI5624 or PI5651 if neither is required by a baccalaureate program into which a student is transferring.

GENERAL STUDIES

The associate in arts degree in General Studies is designed to provide a flexible curriculum which combines a core of transfer courses with an opportunity to explore occupational courses in such career areas as engineering, computer science, management and health professions. It is a practical program for students undecided about career objectives. 34/35 credit hours in core requirements plus 3 credits in Liberal Arts electives plus 24 free electives – a total of 61/62 credits are required for graduation.

| CORE REQUIREMENTS: 35/36 Credits | CREDITS |
|---|-------------|
| Composition I & II | 6 |
| Behavioral Sciences | 3 |
| Foreign Languages/Philosophy/Religion/Creative Arts | 3 |
| History/Government* | 3 |
| Humanities | 3 |
| Literature | 3 |
| Mathematics** | 3 |
| Social Science | 3 |
| Natural Science*** | 7/8 |
| ELECTIVES: 27 Credits | CREDITS |
| Liberal Arts Electives† | 3 |
| Free Electives†† | 24 |

* It should be noted that Salem State and University of Massachusetts at Boston require Western Civilization I and II or World Civilization I and II for graduation in most programs. Political Science carries government credit.

** Any math course except the following: MA0020 Basic Mathematics, MA0030 Basic Algebra I and MA0040 Basic Algebra II, MA5613 Business Math.

*** Natural Science Elective: Select courses from the following catalog categories: biology, chemistry, earth science or physics. Students seeking to transfer must complete two laboratory science courses (4 credits each).

† Any course which falls within the disciplines of the core requirements.

†† May include courses outside Liberal Arts.

GENERAL STUDIES: Graphic Design Option

The associate in arts degree option in Graphic Design has two basic objectives: to teach students the skills used in design, layout, reproduction, advertising, and other graphic arts professions; and secondly, to prepare students for professional schools and advanced work in graphic design, advertising, or desktop publishing. Part-time students, of course, will take more than two years to complete this program. This program offers practical training in the skills needed for entry-level jobs in the commercial design field, an exposure to career possibilities in graphic communication and a chance to develop a number of transferable skills. Courses in this program will also be available as electives to business and technology students on a space available basis. An understanding of graphic design and commercial illustration will enrich almost any field of study, provide personal enrichment for our students, and enhance cultural growth in the arts. 63 credit hours are required for graduation.

| FIRST SEMESTER | CREDITS |
|--------------------------------------|---------|
| EN4401 English Composition I | 3 |
| FA7030 Drawing I | 3 |
| FA7121 Macintosh Design | 3 |
| FA7096 Graphic Design I | 3 |
| HI9901 Western Civilization I | 3 |
| | 15 |
| SECOND SEMESTER | CREDITS |
| EN4402 English Composition II | 3 |
| FA7080 Color & Design | 3 |
| FA7097 Graphic Design II | 3 |
| FA7122 Publication Design | 3 |
| HI9902 Western Civilization II | 3 |
| | 15 |
| THIRD SEMESTER | CREDITS |
| Natural Science** | 4 |
| FA7126 Advanced Publication Design | 3 |
| PS1101 Introduction to Psychology OR | |
| SO3324 Cultural Anthropology | 3 |
| FA9001 Illustration I | 3 |
| FA7031 Drawing II | 3 |
| FA7211 Portfolio for Graphic Design† | 1 |
| | 16/17 |
| FOURTH SEMESTER | CREDITS |
| Natural Science** | 4 |
| Literature | 3 |
| Math*** | 3 |
| MK6679 Advertising OR | |
| MG6686 Small Business Management | 3 |
| Art Elective* | 3 |
| FA7211 Portfolio for Graphic Design† | 1 |
| | 16/17 |

* Recommended: FA7130 Animation, FA7051 Introductory Photography, Graphic Design Internship (Co-op), FA9005 Computer Illustration.

** Recommended: Introduction to Biology I & II, Anatomy & Physiology I & II.

*** See math requirements for General Studies program. For some students, HU4401 Art, Math & Nature maybe used for math requirement.

† May be taken during either the third or fourth semester.

GENERAL STUDIES: Illustration Option

The associate in arts degree option in Illustration is a two-year program for art students who have an interest in visual communication and are interested in pursuing a career in pictorial communication. Required course work includes business studies, opportunities to take print-oriented projects from concept to final form, and the development of a portfolio that reflects a student's individual style, professionalism, and sensitivity to specific media considerations and markets. It is designed to teach students the entry-level skills used in commercial studio; and to prepare students for advanced work in four-year colleges, business, design, and advertising. Advanced students may also want to pursue freelance opportunities. 63 credit hours are required for graduation.

| FIRST SEMESTER | | CREDITS |
|------------------------|-------------------------------|----------------|
| EN4401 | English Composition I | 3 |
| FAT030 | Drawing 1 | 3 |
| H19901 | Western Civilization I | 3 |
| FA7080 | Color & Design | 3 |
| FAT121 | Macintosh Design | 3 |
| | | 15 |
| SECOND SEMESTER | | CREDITS |
| EN4402 | English Composition II | 3 |
| FAT031 | Drawing II | 3 |
| H19902 | Western Civilization II | 3 |
| FA9001 | Illustration I | 3 |
| FAT096 | Graphic Design I | 3 |
| | | 15 |
| THIRD SEMESTER | | CREDITS |
| | Natural Science* | 4 |
| MK6679 | Advertising | 3 |
| PS1101 | Introduction to Psychology OR | |
| SO3324 | Cultural Anthropology | 3 |
| FA7210 | Portfolio for Illustration† | 1 |
| FA9002 | Illustration II | 3 |
| FA9005 | Computer Illustration | 3 |
| | | 16/17 |
| FOURTH SEMESTER | | CREDITS |
| | Natural Science* | 4 |
| | Literature Elective | 3 |
| | Math Elective ** | 3 |
| FA7210 | Portfolio for Illustration† | 1 |
| FA7045 | Figure Drawing | 3 |
| FA7130 | Animation | 3 |
| | | 16/17 |

* Recommended: *Introduction to Biology I & II or Anatomy & Physiology I & II.*

** Any math course acceptable in General Studies program. For some students, HU4011 Art, Math & Nature may be used for math requirement.

*** Recommended Electives: Publication Design, Animation, Introduction to Photography, Painting I, Graphic Design II, Graphic Design Internship (Co-op), Computer Illustration.

† Can be taken during either the third or fourth semester.

GENERAL STUDIES: School Age Child Care Option

The associate in arts degree option in General Studies: School Age Child Care is a two-year program which is career oriented and prepares students for a professional role in the care and supervision of children in school age programs. This program is designed to provide the student with a strong foundation and personal enrichment in the arts and science through the distribution of required courses in the liberal arts. Courses which are specifically designed for the career will integrate theory, knowledge of child growth and development, developmentally appropriate curriculum, sensitivity to cultural needs, an understanding of the role of the child's family and community and the skills necessary for the supervision of school age programs. An integral component of this program is the practicum which allows the student to apply that knowledge as they gain competency and develop professional skills in school age child care. 60-62 credit hours are required for graduation. 34-35 credit hours of work in the core requirements; 3 credits in Liberal Arts elective; 12 credits free electives; 12 credits in School Age Child Care.

| FIRST SEMESTER | | CREDITS |
|------------------------|--|----------------|
| EN4401 | English Composition I | 3 |
| | Natural Science *** | 3/4 |
| | Math Elective** | 3 |
| | Humanities Elective | 3 |
| PS1205 | Human Growth & Development | 3 |
| | | 15/16 |
| SECOND SEMESTER | | CREDITS |
| EN4402 | English Composition II | 3 |
| | Natural Science *** | 3/4 |
| | Social Science | 3 |
| | Foreign Language/Religion/Fine Art | 3 |
| ECE120 | Curriculum in SA Child Care | 3 |
| | | 15/16 |
| THIRD SEMESTER | | CREDITS |
| | History/Government Elective* | 3 |
| | Liberal Arts Elective† | 3 |
| | Free Electives†† | 6 |
| ECE220 | Family & Community Systems | 3 |
| | | 15 |
| FOURTH SEMESTER | | CREDITS |
| | Literature Elective | 3 |
| | Free Electives†† | 6 |
| ECE221 | Administration/Supervision SA Programs | 3 |
| ECE290 | SA Child Care Practicum | 3 |
| | | 15 |

* Salem State and University of Massachusetts at Boston require Western Civilization I and II or World Civilization I and II for graduation in most programs. Political Science carries government credit.

** Any math course except the following: MA0020 Basic Mathematics, MA0030 Basic Algebra I and MA0040 Basic Algebra II, MA5613 Business Math.

*** Natural Science elective: Select courses from the following catalog categories: biology, chemistry, earth science, physics. One science must include laboratory and carry 4 credits. Students seeking to transfer should complete two laboratory science courses (4 credits each).

† Any course which falls within the disciplines of the core requirements.

†† May include courses outside Liberal Arts

Admission conditions to School Age Option: letters of reference, a personal interview with the Curriculum Coordinator. A CORI Review will be required prior to the practicum placement.

HEALTH INFORMATION TECHNOLOGY

The associate in science degree program in Health Information Technology provides students an opportunity to take liberal arts courses and to apply knowledge obtained in technical courses through direct application in a clinical setting located off campus. Students who wish to continue their education in a four-year institution should choose electives which will fulfill the transfer requirements of the institution they choose. Job opportunities are available in hospitals, extended care facilities, mental health facilities, skilled nursing facilities, ambulatory care settings, community health centers, state and local health departments, regional medical programs and rehabilitation centers. **The program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in collaboration with the American Health Information Management Association (AHIMA).** Students who complete requirements for graduation are eligible to take the national accreditation examination of the American Health Information Management Association. 68 credit hours are required for graduation.

| | CREDITS |
|--|---------|
| EN4401 English Composition I | 3 |
| BI5519 Anatomy & Physiology I | 4 |
| MR6605 Introduction to Medical Language I | 3 |
| MR6601 Introduction to Health Information Practices & Procedures | 3 |
| HS6651 Introduction to Health Services | 3 |
| | 16 |
| SECOND SEMESTER | CREDITS |
| EN4402 English Composition II | 3 |
| BI5520 Anatomy & Physiology II | 4 |
| MR6606 Introduction to Medical Language II | 3 |
| MR6602 Health Information – Legal Aspects | 3 |
| MR6620 Directed Practice I* | 4 |
| CT3301 Computer Literacy for Health Professionals | 1 |
| | 18 |
| THIRD SEMESTER | CREDITS |
| MR6651 Healthcare Data Collection & Analysis | 3 |
| CT6630 Computer Applications | 3 |
| MR6629 Medical Record Coding & Classification | 3 |
| BI5530 Fundamentals of Disease Process | 3 |
| Liberal Arts Elective | 3 |
| PS1101 Introduction to Psychology OR | |
| SO3321 Introduction to Sociology | 3 |
| | 18 |
| FOURTH SEMESTER | CREDITS |
| MR6655 Quality Improvement & Management Techniques | 3 |
| MG6666 Principles of Management | 3 |
| Elective | 3 |
| MR6622 Directed Practice II* | 4 |
| Elective | 3 |
| | 16 |

* Transportation to directed practice sites is the student's responsibility. Students enrolled in Directed Practice must carry malpractice insurance.

THE HONORS EXPERIENCE

The Honors Experience offers increased challenge for students with strong academic skills. This program provides an opportunity for students to participate in an interdisciplinary course and to complete honors projects in liberal arts courses.

Students, with a grade point average of 3.3, may take individual liberal arts courses for honors designation.

In order to graduate from Northern Essex with an Honors Experience designation on the transcript, students must maintain a 3.5 grade point average and meet the following requirements:

For admission to the program directly from high school students must

- have advanced placement standing with a grade of four or better and/or a B+ average in high school courses
- be in the top one-fourth of their graduating class
- submit a letter of recommendation from a guidance counselor or faculty member

For admission from Northern Essex or another college students must

- have completed at 12 credits but no more than 30 from Northern Essex or another college
- have a grade point average of 3.5 in the most recent 12 credits taken
- submit either an essay or two letters of recommendation

Program requirements:

- complete four (4) courses in liberal arts with an honors project component
- complete an Honors Colloquium course

At least one course must be taken in each of the following categories:

CATEGORY I

English/Literature
Foreign Language
Fine Arts
Philosophy/Religion

CATEGORY II

Math
Science

CATEGORY III

Geography
Government
History
Anthropology
Psychology
Sociology

HUMAN SERVICES

The associate in science degree program in Human Services is designed to give students a solid foundation in the human service principles, values, theories, and skills needed to provide services as a human service practitioner. The program prepares graduates to promote and respect the dignity of all individuals, to be sensitive to cultural diversity, and to recognize individual differences. The curriculum content includes knowledge of human services, treatment modalities, assessment, supportive counseling, advocacy skills, group dynamics, principles/techniques of behavior management, case management, confidentiality, and professional ethics. Students are placed in selected practicums whereby they have an educational experience under professional supervision that promotes personal and professional growth. Graduates of the program have the essential skills to work as a human service practitioner with adults and children with emotional disability, mental illness, developmental disability, and substance abuse. They pursue careers in community multi-service agencies, hospitals, inpatient services, outpatient services, and schools. The program contains the National Community Support Skill Standards and is approved by the Council for Standards in Human Service Education. 61 credit hours are required for graduation. See a representative in the Office of Admission for additional admissions criteria for this program.

| | | CREDITS |
|-----------------|--|---------|
| FIRST SEMESTER | | |
| EN4401 | English Composition I | 3 |
| PS1101 | Introduction to Psychology | 3 |
| MH2111 | Introduction to Human Services | 3 |
| BI5510 | Human Biology | 3 |
| | Elective | 3 |
| MH2133 | Observation & Recording of Human Services Programs | 1 |
| | | 16 |
| SECOND SEMESTER | | |
| EN4402 | English Composition II | 3 |
| | Elective | 3 |
| | Natural Science Elective | 3/4 |
| MH2155 | Modalities of Treatment | 3 |
| MH2134 | Human Services Practicum I | 4 |
| | | 16/17 |
| THIRD SEMESTER | | |
| PS1751 | Abnormal Psychology | 3 |
| MH2143 | Human Services Practicum II | 4 |
| MH2147 | Group Dynamics | 3 |
| GV3310 | American Government & Politics | 3 |
| | | 13 |
| FOURTH SEMESTER | | |
| MH2166 | Seminar in Human Services | 3 |
| MH2144 | Human Services Practicum III | 4 |
| FA7012 | Introduction to the Creative Experience | 3 |
| | Sociology Elective | 3 |
| MH2156 | Behavior Mgt. Principles & Techniques | 3 |
| | | 16 |

NOTE: All courses with an "MH" prefix are restricted to students enrolled in the Human Services,Community Residence Manager or Alcohol/Drug Abuse Counseling programs. Other students may take MH prefix courses, depending upon class size, with written permission of the coordinator. Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

LIBERAL ARTS

The associate in arts degree program in Liberal Arts is designed to foster the development of the well rounded individual. It encourages students to acquire knowledge, skills and abilities to make sound judgments, to reach reasoned conclusions and to express themselves confidently and effectively. This program is designed for those who seek immediate transfer to a four year educational institution and for those wishing to enter the job market. The associate in arts degree in Liberal Arts requires students to complete: 44 credit hours in core courses and 18 credit hours in elective courses (total 62 credits) for graduation.

CORE REQUIREMENTS: 44 credits

| | CREDITS |
|-------------------------------|---------|
| Composition I & II | 6 |
| Behavioral Sciences* | 6 |
| Foreign Languages/Philosophy/ | |
| Religion/Creative Arts** | 6 |
| History/Government*** | 6 |
| Literature† | 6 |
| Mathematics†† | 6 |
| Natural Science††† | 8 |

* All courses offered in Anthropology, Psychology and Sociology; i.e., with PS and SO prefixes.

** Art, Dance, Music, Photography, Theatre.

*** All courses with GV and HI prefixes.

† Any course offered by the Department of English which includes the word "literature" anywhere in the course title.

†† Any math (MA) course except the following: MA0020 Basic Math, MA0030 Basic Algebra I, MA0040 Basic Algebra II and MA5613 Business Math.

††† Two science courses with laboratory requirements.

ELECTIVES: 18 Credits (or more). Electives include any course offered by the departments of English; Foreign Languages; Philosophy & Religion; Creative Arts; History & Government (including GE prefix, Geography); Behavioral Sciences; Mathematics and Natural Sciences. Students may also take up to 3 credits in the Department of Sport & Leisure Studies and/or up to 6 credits in college level courses offered by any other department in the college. (Additional electives in other areas must be approved in advance by the Dean of Humanities, Social Sciences & Human Services.)

Planning Your Liberal Arts Program: In order to help students focus their Liberal Arts studies more effectively and choose courses which meet their individual needs and interests, Northern Essex has developed a number of suggested approaches to the scheduling of courses in the Liberal Arts program. These include Degree Options and one Degree Concentration. Students can design their own program of study with help from faculty advisors. All students who wish to transfer should consult the catalogs of four year institutions for specific program requirements.

LIBERAL ARTS DEGREE CONCENTRATION

Students matriculated in the Liberal Arts program may take up to 18 credits offered by any other department if they are identified as being enrolled in an approved Liberal Arts degree concentration. Unless otherwise noted, the core requirements of the Liberal Arts Degree must be met.

LIBERAL ARTS: Physical Education/Recreation Degree Concentration

The associate in arts degree concentration in Physical Education and Recreation is offered by the Department of Sport & Leisure Studies and the Liberal Arts divisions. The concentration is designed to meet individual needs and career goals in the broad fields of both recreation and physical education. There is enough built in flexibility within the concentration to allow students an opportunity to explore the various career alternatives within the whole range of leisure services. Students will also have an opportunity to transfer to leisure service programs at the baccalaureate level. 62 credit hours are required for graduation.

| FIRST SEMESTER | CREDITS |
|---|---------|
| EN4401 English Composition I | 3 |
| PS1101 Introduction to Psychology | 3 |
| PE2001 Introduction to Physical Education | 3 |
| History & Government Elective | 3 |
| Math Elective* | 3 |
| | 15 |
| SECOND SEMESTER | CREDITS |
| EN4402 English Composition II | 3 |
| SO3321 Introduction to Sociology | 3 |
| PE2020 Foundations of Health & Fitness | 3 |
| History & Government Elective | 3 |
| Math Elective** | 3 |
| | 15 |
| THIRD SEMESTER | CREDITS |
| PE2296 Aerobics in Theory & Practice | 2 |
| Natural Science Elective | 4 |
| Humanities Elective | 3 |
| Literature Elective | 3 |
| Category I OR II Elective** | 4 |
| | 16 |
| FOURTH SEMESTER | CREDITS |
| PE2012 First Aid & CPR | 3 |
| Natural Science Elective | 4 |
| Humanities Elective | 3 |
| Literature Elective | 3 |
| Category I OR II Elective** | 3 |
| | 16 |

Category I Electives: PE1057 Ballet, PE1008 Canoeing, PE1038 Cross-Country Skiing, PE1044 Cycling, PE1011 Fly Fishing, PE1014 Golf, PE2009 Jazz Dance, PE1042 Jogging, PE2010 Modern Dance I, PE1050 Racquetball, PE1031 Weight Training, PE1041 Yoga, or any other appropriate skills course approved by the Department Chairperson.

Category II Electives: FA7094 Dance Composition, FA7091 Dance in Performance, CO4401 Cooperative Education.

* See Liberal Arts Math requirement.

** A total of 3 or 4 credits can be earned by a combination of category I electives and category II electives.

LIBERAL ARTS DEGREE OPTIONS

Specific degree options within Board of Regents approved degree programs will recommend or require a minimum of either six courses or twenty credits as defined within the college catalog and will be included on the college transcript. These options are carefully reviewed for degree applicability and have been approved by the College. Students should meet with their advisors for clarification of degree requirements and application of their transfer credits and/or work experience towards program requirements.

LIBERAL ARTS: Computer & Information Sciences Degree Option

The Liberal Arts Option in Computer & Information Sciences (CIS) is offered by the Department of Computer and Information Sciences and the Liberal Arts divisions. This option provides study in liberal arts and computer & information sciences, and is designed for those students who may wish to transfer to a four year institution. This program is also designed to meet individual student needs and career goals in the broad fields encompassing computers and information processing. 63 credit hours are required for graduation. **Program Prerequisites:** TW6650 Document Processing or equivalent skills and two years of high school algebra or MA0040 Basic Algebra II or equivalent.

FIRST SEMESTER

| | CREDITS |
|------------------------------|----------------|
| Category I or II elective | 3/4 |
| Category I or II elective | 3/4 |
| EN4401 English Composition I | 3 |
| Math Elective* | 4 |
| History/Government Elective | 3 |
| | 15/18 |

SECOND SEMESTER

| | CREDITS |
|-------------------------------|----------------|
| Programming Elective** | 4 |
| EN4402 English Composition II | 3 |
| Math Elective* | 3/4 |
| History/Government Elective | 3 |
| Literature Elective | 3 |
| | 16/17 |

THIRD SEMESTER

| | CREDITS |
|--|----------------|
| Category II Elective | 3/4 |
| Category III Elective | 3/4 |
| Behavioral Science Elective | 3 |
| Philosophy/Creative Arts/ Foreign Language Elective | 3 |
| Natural Science Elective | 4 |
| | 16/18 |

FOURTH SEMESTER

| | CREDITS |
|--|----------------|
| Category II Elective | 3/4 |
| Behavioral Science Elective | 3 |
| Literature Elective | 3 |
| Philosophy/Creative Arts/ Foreign Language Elective | 3 |
| Natural Science Elective | 4 |
| | 16/17 |

* Math chart starting at the level of MA5615 College Algebra or MA5621 College Algebra & Trigonometry.

** Any 4 credit programming course.

Electives may not include any developmental courses such as Basic Math I and Basic Math II, Basic Algebra I and Basic Algebra II, Basic Reading or Basic Writing.

The following five courses must be taken from the Department of Computer & Information Sciences (CIS):

- Computer Programming Elective
- 2 Courses from Category I or II
- 2 Courses from Category II
- 1 Course from Category III

Computer Programming Electives:

(These courses have Prerequisites.)

- CT6620 Programming I
- CT6665 Visual Basic Programming

Category I Electives:

(Some of these courses have Prerequisites.)

- CT6610 Introduction to Programming & Problem Solving
- CT6626 Introduction to Information Processing
- CT6630 Computer Applications
- CT6670 Introduction to CAD/CAM
- CT6682 Engineering Computer Applications

Category II Electives:

(These courses have Prerequisites.)

- CT6623 Current Topics in Computer Science
- CT6641 Introduction to Operating Systems
- CT6688 C++ Programming Language

Computer Applications Sequence:

- CT6642 Integrated Computer Applications
- CT6632 Data Management Applications
- CT6681 Advanced Database Management Software

Computer Science Programming Sequence:

- CT6620 Programming I
- CT6640 Programming II
- CT6655 Programming III

Web Page Programming Sequence:

- CT6654 The Internet & Web Page Development (HTML)
- CT6656 Internet Languages &
- Web Authoring Techniques I
- CT6657 Internet Languages Web &
- Authoring Techniques II

Category III Electives:

(These courses have Prerequisites.)

- EN4676 Technical Writing
- Upper level math course (must follow math electives)
- Any 4 credit CIS course except CT6626 Introduction to Information Processing/Programming

Please Note the following:

It is important for you to check with the college or university you wish to transfer to about your category I, II, III & programming electives. Make sure the college or university will accept your choices.

LIBERAL ARTS: Creative Arts Option

The associate in arts degree option in Creative Arts allows students to explore their interest in dance, music, theatre or art. Students may select introductory and specialized courses in each of these areas. Drama, dance and musical productions are presented each year, offering an excellent opportunity for practical experience. 62 credit hours are required for graduation.

FIRST SEMESTER

| | CREDITS | |
|--------------------------------------|---------|--|
| EN4401 English Composition I | 3 | |
| HI9901 Western Civilization I | 3 | |
| FA7020 Introduction to Creative Arts | 3 | |
| Art, Dance, Music, Theatre Elective* | 3 | |
| Math Requirement** OR | | |
| Free Elective*** | 3 | |
| | 15 | |

SECOND SEMESTER

| | CREDITS | |
|--------------------------------------|---------|--|
| EN4402 English Composition II | 3 | |
| HI9902 Western Civilization II | 3 | |
| HU4000 Introduction to Humanities | 3 | |
| Art, Dance, Music, Theatre Elective* | 3 | |
| Math Requirement** OR | | |
| Free Elective*** | 3 | |
| | 15 | |

THIRD SEMESTER

| | CREDITS | |
|---------------------------------------|---------|--|
| Natural Science Elective | 4 | |
| EN8861 Western Literature Before 1600 | 3 | |
| Behavioral Science Elective | 3 | |
| Art, Dance, Music, Theatre Elective* | 3 | |
| Math Requirement** OR | | |
| Free Elective*** | 3 | |
| | 16 | |

FOURTH SEMESTER

| | CREDITS | |
|--------------------------------------|---------|--|
| Natural Science Elective | 4 | |
| EN8862 Western Literature Since 1600 | 3 | |
| SO3324 Cultural Anthropology | 3 | |
| Art, Dance, Music, Theatre Elective* | 3 | |
| Math Requirement** OR | | |
| Free Elective*** | 3 | |
| | 16 | |

* Students must take at least 3 credits in each of the following areas:

Dance: Dance Composition; Dance in Performance; Modern Dance, I, II; Ballet I & II; Jazz Dance.

Theatre: Introduction to Theatre, Acting, Mime, History of Theatre, Scene Study.

Visual Arts: Introduction to Art, Painting, Drawing, Graphic Design.

Music: Introduction to Music, History of Jazz, Music Reading, Chorus, Performance Ensemble, Music Technology.

** See Liberal Arts Math requirement.

*** Free Electives: Includes any course offered by the departments of English, Foreign Languages/Philosophy/Religion, Creative Arts, History & Government, Behavioral Sciences, Mathematics, Natural Sciences & Business. Students may also take up to 3 credits in the Department of Sport & Leisure Studies and/or up to 6 credits in courses offered by any other department of the college.

LIBERAL ARTS: Cross-Cultural Option

The associate in arts degree option in Cross-Cultural is designed as a suggested curriculum for students who wish to include an intercultural perspective in their curriculum at Northern Essex. This option takes into account the requirements for an Associate in Arts Degree in Liberal Arts. 62-64 credits are required for graduation.

GROUP I

| | CREDITS |
|--|---------|
| EN4401 English Composition I | 3 |
| SO3321 Introduction to Sociology with Cross Cultural Perspective | 3 |
| Foreign Language OR | |
| HU4000 Introduction to Humanities | 3 |
| GE9511 Introduction to Geography | 3 |
| Mathematics Elective**** | 3/4 |
| | 15/16 |

GROUP II

| | CREDITS |
|-----------------------------------|---------|
| EN4402 English Composition II | 3 |
| SO3324 Cultural Anthropology | 3 |
| HI9900 Contemporary World OR | 3 |
| HU4000 Introduction to Humanities | 3 |
| Foreign Language OR | |
| HU4000 Introduction to Humanities | 3 |
| Mathematics Elective**** | 3/4 |
| | 15/16 |

GROUP III

| | CREDITS |
|--|---------|
| SO3333 Contemporary Social Problems | 3 |
| Natural Science | 4 |
| Literature Elective*** | 3 |
| HI9955 Minority Groups in America | 3 |
| GV3312 Introduction to Political Science | 3 |
| | 16 |

GROUP IV

| | CREDITS |
|--------------------------------|---------|
| Natural Science | 4 |
| Literature Elective*** | 3 |
| Free Elective | 3 |
| Philosophy/Religion Elective** | 3 |
| History Elective* | 3 |
| | 16 |

* Modern China & Japan; Western Civilization I; Western Civilization II; Politics & Society in Eastern Europe; Twentieth Century Russia; American Government & Politics; American Foreign Policy; and Recent U.S. History.

** World Religions

*** Western Literature; British Literature; Women's Lives; Women in Literature & Life.

**** See Liberal Arts Math requirement.

LIBERAL ARTS: Dance Option

The associate in arts degree option in Dance allows students to experience the feeling, enthusiasm, and spirit of dance through class and performance situations. Students will develop ease of movement, coordination and endurance as they learn the technical skills that the program provides. You will also learn the choreographic skills which enable you to express your creative potential and to learn to direct and manipulate movement in a solo or group setting. 64 credits are required for graduation.

| FIRST SEMESTER | CREDITS |
|---|---------|
| EN4401 English Composition I | 3 |
| HI9901 Western Civilization I | 3 |
| Behavioral Science** or Math* Requirement | 3 |
| FA7094 Dance Composition | 3 |
| PE1070 Ballet I | 2 |
| PE2010 Modern Dance I | 2 |
| | 16 |
| SECOND SEMESTER | CREDITS |
| EN4402 English Composition II | 3 |
| HI9902 Western Civilization II | 3 |
| FA7020 Introduction to Creative Arts | 3 |
| FA7091 Dance in Performance | 3 |
| PE2009 Jazz Dance | 2 |
| PE1071 Ballet II | 2 |
| | 16 |
| THIRD SEMESTER | CREDITS |
| EN8861 Western Literature I | 3 |
| Behavioral Science** or Math* Requirement | 3 |
| Natural Science*** | 4 |
| FA7090 Dance Repertory I | 3 |
| Liberal Arts Elective | 3 |
| | 16 |
| FOURTH SEMESTER | CREDITS |
| EN8862 Western Literature II | 3 |
| Behavioral Science** or Math* Requirement | 3 |
| Natural Science*** | 4 |
| Behavioral Science** or Math* Requirement | 3 |
| FA7290 Introduction to Creative Arts | 3 |
| | 16 |

Students must take at least 19 credits in dance: Dance Composition; Dance in Performance; Pedagogy; Repertory; Modern Dance I, II; Ballet I, II; Jazz Dance. Directed Studies courses are available in Dance History & Ballet in Performance.

* See Liberal Arts Math requirement. Students must take 6 credit hours of math.

** Cultural Anthropology required and one other behavioral science.

*** Recommended: Anatomy & Physiology I & II.

Still Point: High point of the Dance Program is the annual spring dance performance, Still Point. This production combines many areas of dance: modern, jazz, ballet, African.

Dance Club: The Dance Club exists for the purpose of providing physical and creative expression and an awareness of the joy of movement. It encourages participation by faculty and alumni as well as students. Dance Club members also participate in Still Point. The Still Point Dancers, the dance company of the college, are part of the Dance Club. They are a touring company and perform in schools and colleges and participate in various community and college activities.

LIBERAL ARTS: History Option

The associate in arts degree option in History offers guidance in course selection to students interested in pursuing a bachelor's degree in History. Although this sequence takes into account prerequisites in the History departments in many New England colleges, it is only a suggested course sequence. Students interested in a history major should consult with an advisor concerning appropriate history electives. 62 credits are required for graduation.

| GROUP I | CREDITS |
|-----------------------------------|---------|
| EN4401 English Composition I | 3 |
| Math Elective* | 3 |
| Behavioral Science Elective | 3 |
| Foreign Language Elective | 3 |
| HI9913 U.S. History I OR | |
| HI9901 Western Civilization I OR | |
| HI9904 World Civilization I | 3 |
| | 15 |
| GROUP II | CREDITS |
| EN4402 English Composition II | 3 |
| Math Elective* | 3 |
| Behavioral Science Elective | 3 |
| Foreign Language Elective | 3 |
| HI9914 U.S. History II OR | |
| HI9902 Western Civilization II OR | |
| HI9905 World Civilization II | 3 |
| | 15 |
| GROUP III | CREDITS |
| Literature Elective | 3 |
| Science Elective | 4 |
| EC3322 Micro Economics | 3 |
| GE9511 Introduction to Geography | 3 |
| History/Government Elective | 3 |
| | 16 |
| GROUP IV | CREDITS |
| Literature Elective | 3 |
| Natural Science Elective | 4 |
| EC3323 Macro Economics | 3 |
| History/Government Electives | 6 |
| | 16 |

* See Liberal Arts Math requirement.

History/Government Electives: HI9900 The Contemporary World, HI9916 Recent U.S. History, HI9917 The Family in History, HI9953 Modern China & Japan, HI9955 Minority Groups in America, HI9956 American Foreign Policy, HI9958 History of the Soviet Union, HI9959 History of Latin America, HI9960 The Modern Middle East, HI9962 Women's History, GV3310 American Government & Politics, and GV3320 Women & the Law. **NOTE:** Students are urged to consult with transfer institutions prior to selecting electives. As well, students should complete all of the courses in each group, prior to proceeding to the next group, of courses.

LIBERAL ARTS: International Relations Option

The associate in arts degree option in International Relations is designed for students who wish to include an international perspective in their curriculum at Northern Essex but are unable to study overseas. This option takes into account the requirements for an Associate in Arts Degree in Liberal Arts. 62-64 credits are required for graduation.

GROUP I

| | CREDITS |
|--|---------|
| EN4401 English Composition I | 3 |
| SO3321 Introduction to Sociology with Cross Cultural Perspective | 3 |
| Foreign Language | 3 |
| GE9511 Introduction to Geography | 3 |
| Mathematics Elective* | 3/4 |
| | 15/16 |

GROUP II

| | CREDITS |
|-------------------------------|---------|
| EN4402 English Composition II | 3 |
| SO3324 Cultural Anthropology | 3 |
| HI9900 Contemporary World | 3 |
| Foreign Language | 3 |
| Mathematics Elective* | 3/4 |
| | 15/16 |

GROUP III

| | CREDITS |
|--|---------|
| EC3322 Micro Economics | 3 |
| Natural Science | 4 |
| Literature Elective** | 3 |
| GV3312 Introduction to Political Science | 3 |
| History Elective† | 3 |
| | 16 |

GROUP IV

| | CREDITS |
|---------------------------------|---------|
| Natural Science | 4 |
| Literature Elective** | 3 |
| Free Elective†† | 3 |
| Philosophy/Religion Elective*** | 3 |
| History Elective† | 3 |
| | 16 |

* See Liberal Arts Math requirement.

** Western Literature, British Literature, Women's Lives, Women in Literature & Life.

*** World Religions

† Western Civilization I, Western Civilization II, World Civilization I & II, American Foreign Policy, History of Latin America, Twentieth Century Russia, Politics & Society in Eastern Europe, Modern China & Japan, Modern Middle East.

†† Macro Economics or International Business recommended.

NOTE: Students are urged to consult with transfer institutions prior to selecting electives. As well, students should complete all of the courses in each group, prior to proceeding to the next group, of courses.

LIBERAL ARTS: Journalism/Broadcasting Option

As a student in the associate in arts degree option in Journalism/Broadcasting at Northern Essex, you will learn what it's like to work in the communications field, a choice which can ultimately lead to career opportunities in newspapers, magazine, publishing, television or radio. At Northern Essex, we provide you with the basic courses and practical experience which will prepare you for a career in print or broadcast journalism. A full two-year sequence of courses in print journalism guarantees students the most comprehensive introduction to print journalism available at any two-year college in Massachusetts. 62 credits are required for graduation.

FIRST SEMESTER

| | CREDITS |
|---------------------------------------|---------|
| EN4401 English Composition I | 3 |
| EN5101 Journalism I | 3 |
| EN5334 TV Production I | 3 |
| GV3310 American Government & Politics | 3 |
| FA7121 Macintosh Design | 3 |
| | 15 |

SECOND SEMESTER

| | CREDITS |
|-----------------------------------|---------|
| EN5102 Journalism II | 3 |
| EN5333 Broadcast Reporting | 3 |
| PS1101 Introduction to Psychology | 3 |
| History/Government Elective | 3 |
| Fine Arts Elective* | 3 |
| | 15 |

THIRD SEMESTER

| | CREDITS |
|---------------------------------|---------|
| EN4402 English Composition II | 3 |
| Natural Science | 4 |
| Literature Elective | 3 |
| Math Elective** | 3 |
| EN5104 Copy Editing OR Elective | 3 |
| | 16 |

FOURTH SEMESTER

| | CREDITS |
|--|---------|
| SO3321 Introduction to Sociology OR | 3 |
| SO3324 Cultural Anthropology | 4 |
| Natural Science | 3 |
| Literature Elective | 3 |
| Math Elective** | 3 |
| EN5103 Journalism Practicum OR Journalism Elective | 3 |
| | 16 |

* FA7051 Introductory Photography and FA7122 Publication Design are recommended for Fine Arts electives.

** See Liberal Arts Math requirement.

LIBERAL ARTS: Legal Studies Option

The associate in arts degree option in Legal Studies provides valuable understanding of the impact of legal issues in a variety of fields in contemporary society. Since law is permeating increasingly various areas of everyday life, a focus on legal issues provides a much needed component to a well-rounded education and a good preparation for a four year Liberal Arts transfer program. A total of 63-65 credit hours are required for graduation.

| GROUP I | | CREDITS |
|-----------|---------------------------------------|---------|
| EN4401 | English Composition I | 3 |
| | Math Elective* | 3/4 |
| SO3324 | Cultural Anthropology | 3 |
| GV3300 | Introduction to Law | 3 |
| | History Elective | 3 |
| | | 15/16 |
| GROUP II | | CREDITS |
| EN4402 | English Composition II | 3 |
| GV3312 | Introduction to Political Science | 3 |
| GV3301 | U.S. Constitutional Law | 3 |
| | Math Elective* | 3/4 |
| | History Elective | 3 |
| | | 15/16 |
| GROUP III | | CREDITS |
| GV3315 | Civil Rights & Liberties | 3 |
| | Literature Elective | 3 |
| LW6670 | Legal Research & Writing | 4 |
| | Science Elective | 4 |
| | Foreign Language *** OR | |
| | Philosophy | 3 |
| | | 17 |
| GROUP IV | | CREDITS |
| | Behavioral Science Elective** | 3 |
| | Cooperative Education (in Legal Area) | 3 |
| | Literature Elective | 3 |
| | Foreign Language OR | |
| | Philosophy | 3 |
| | Science Elective | 4 |
| | | 16 |

* See Liberal Arts Math requirement.

** Choose one of the following:

SO3333 Contemporary Social Problems

SO3353 Introduction to Criminology

SO3355 Introduction to Social Welfare

SO3343 Juvenile Delinquency (Prerequisite SO3321)

SO3360 Race & Ethnic Relations

PS1351 Social Psychology (Prerequisite PS1101 or SO3321)

SO3358 Women and Society

*** Spanish I or II highly recommended.

Students are urged to develop basic computer literacy skills in preparation for transfer to a four year institution.

LIBERAL ARTS: Music Option

The associate in arts degree option in Music offers guidance in course selection to students interested in preparing for careers in music, either those seeking professional work or those seeking transfer to four year colleges. Students are prepared to transfer to college curriculums and/or pursue professional work in the jazz, pop and classical areas of music. Students enrolled in the music option should plan on taking at least 18 credits but no more than 24 credits in music courses. 62 credit hours are required for graduation.

| FIRST SEMESTER | | CREDITS |
|-----------------|---|---------|
| MU7061 | Music Reading & Theory I* | 3 |
| MU7051 | Introduction to Music* | 3 |
| EN4401 | English Composition I | 3 |
| MA5520 | Liberal Arts Math I | 3 |
| PS1101 | Introduction to Psychology | 3 |
| | | 15 |
| SECOND SEMESTER | | CREDITS |
| MU7062 | Music Reading & Theory II* | 3 |
| MU7052 | Survey of Music: Ancient to Modern Times* | 3 |
| EN4402 | English Composition II | 3 |
| MA5525 | Liberal Arts Math II Behavioral Science Elective | 3 |
| | | 15 |
| THIRD SEMESTER | | CREDITS |
| MU7131 | Music Technology: Sound* | 3 |
| | Music Elective* | 3 |
| HI9901 | Western Civilization I Literature Elective Natural Science | 3 |
| | | 4 |
| | | 16 |
| FOURTH SEMESTER | | CREDITS |
| MU7132 | Music Technology: Composition* | 3 |
| | Music Elective* | 3 |
| HI9902 | Western Civilization II Literature Elective Natural Science | 3 |
| | | 4 |
| | | 16 |

Recommended Music Electives:

MU7110 Chorus I

MU7111 Chorus II

MU7097 Performance Ensemble I

MU7098 Performance Ensemble II

MU7080 Piano

MU7100 Harmony

Directed Studies in Music, such as

Ear Training (CAI)

Computer Music Notation (CAI)

* These courses are required for completion of the Music Option of the Liberal Arts Program. Other courses identified are strongly recommended and may only be changed after consultation with the Program Advisor and Assistant Dean of Humanities, Social Sciences and Human Services. Distribution requirements for Liberal Arts Program apply.

LIBERAL ARTS: Philosophy Option

The associate in arts degree option in Philosophy provides a base for a variety of personal goals. Philosophy is a handle on the door of opportunity, sharpening our ability to think clearly, evaluate ideas, assess options and to make reasoned decisions. These are useful skills for personal, career and professional life. Whether one majors in philosophy or in some other field of liberal arts at a four-year college or university, the philosophy option provides a solid foundation for branching off in many exciting directions. Philosophy students move into fields of law, public service, religion, education, journalism, the arts, corporate management and business, using to good advantage their exposure to wide-ranging ideas and viewpoints and their ability to understand and to reason. Leaders of major corporations say, "Give us people who know how to think, and we will train them in our specialties." The Philosophy Option will sharpen your intellect for whatever the future may bring. 62 credit hours are required for graduation.

| FIRST SEMESTER | | CREDITS | |
|------------------------|-----------------------------|----------------|--|
| EN4401 | English Composition I | 3 | |
| HI9901 | Western Civilization I* | 3 | |
| PH1101 | Introduction to Philosophy* | 3 | |
| | Math Elective** | 3 | |
| PS1101 | Introduction to Psychology | 3 | |
| | | 15 | |
| SECOND SEMESTER | | CREDITS | |
| EN4402 | English Composition II | 3 | |
| HI9902 | Western Civilization II* | 3 | |
| PH1102 | Basic Issues in Philosophy* | 3 | |
| | Math Elective** | 3 | |
| PH1150 | Practical Logic* | 3 | |
| | | 15 | |
| THIRD SEMESTER | | CREDITS | |
| | Science Elective | 4 | |
| | Literature Elective | 3 | |
| RE1101 | World Religions* | 3 | |
| PH1141 | Ethics* | 3 | |
| | Elective | 3 | |
| | | 16 | |
| FOURTH SEMESTER | | CREDITS | |
| | Science Elective | 4 | |
| | Literature Elective | 3 | |
| | Behavioral Science Elective | 3 | |
| | Elective | 3 | |
| | Elective | 3 | |
| | | 15 | |

* Required courses in option.

** See Liberal Arts Math requirement.

Recommended Electives: PH1151 Logic, PH0001 Early and Medieval Philosophy, PH0002 Modern Philosophy may be taken in the third and fourth semesters.

LIBERAL ARTS: Political Science Option

The associate in arts degree option in Political Science offers guidance in course selection to students interested in pursuing a bachelor's degree in Political Science, Government, or Public Administration. Although this sequence takes into account prerequisites in these departments in many New England colleges, it is only a suggested course sequence. Students interested in further study in these areas should consult with an advisor concerning appropriate electives. 62 credit are required for graduation.

| GROUP I | | CREDITS |
|------------------|-----------------------------------|----------------|
| EN4401 | English Composition I | 3 |
| | Math Elective* | 3 |
| | Behavioral Science Elective | 3 |
| GV3312 | Introduction to Political Science | 3 |
| | Foreign Language Elective | 3 |
| | | 15 |
| GROUP II | | CREDITS |
| EN4402 | English Composition II | 3 |
| MA5673 | Quantitative Methods | 3 |
| | Behavioral Science Elective | 3 |
| GV3310 | American Government & Politics | 3 |
| | Foreign Language Elective | 3 |
| | | 15 |
| GROUP III | | CREDITS |
| | Literature Elective | 3 |
| | Science Elective | 4 |
| EC3322 | Micro Economics | 3 |
| GE9511 | Introduction to Geography | 3 |
| | Government/History Elective | 3 |
| | | 16 |
| GROUP IV | | CREDITS |
| | Literature Elective | 3 |
| | Science Elective | 4 |
| EC3323 | Macro Economics | 3 |
| | Government/History Electives | 6 |
| | | 16 |

* See Liberal Arts Math requirement.

Government/History Electives: U.S. History I and II strongly recommended and other government courses such as Introduction to Law, Constitutional Law, Civil Rights, Minority Groups in America, and Recent U.S. History.

NOTE: Students are urged to consult with transfer institutions prior to selecting electives. As well, students should complete all of the courses in each group, prior to proceeding to the next group of courses.

LIBERAL ARTS:

Psychology Transfer Option

The purpose of the associate in arts degree option in Psychology Transfer is to prepare those students who are interested in pursuing career opportunities in the field of Psychology and are intending to transfer to a four year institution. The course work outlined below provide students with the basic liberal arts courses necessary for transfer. In addition it exposes students to introductory level psychology courses, as well as the other related behavioral sciences that provide students with a strong academic background for further study at the Bachelor's level and beyond. 62 credits are required for graduation.

CREDIT REQUIREMENTS

| | | | |
|---------|--|--|--|
| EN4401/ | | | |
| EN4402 | English Composition I & II (6 credits) | | |
| | Literature* (6 credits) | | |
| BI5515/ | | | |
| BI5525 | Introductory Biology I & II (8 credits) | | |
| HI9904/ | | | |
| HI9905 | World Civilization I & II** OR | | |
| HI9901/ | | | |
| HI9902 | Western Civilization I & II (6 credits)** | | |
| PH1101 | Introduction to Philosophy (3 credits) | | |
| | Philosophy/Foreign Language/ | | |
| | Religion/Fine Arts Elective *** (3 credits) | | |
| | Math Elective**** (6 credits) | | |
| PS1101 | Introduction to Psychology (3 credits) | | |
| SO3321 | Introduction to Sociology (3 credits) | | |
| SO3324 | Cultural Anthropology (3 credits) | | |
| PS1751 | Abnormal Psychology OR | | |
| PS1154 | Psychology of Personality (3 credits) | | |
| | Psychology Elective from Developmental Area† | | |
| | (3 credits) | | |
| | Sociology Elective†† (3 credits) | | |
| | Electives††† (6 credits) | | |

* Sequential literature courses highly recommended.

** Inquire at transfer institution to determine appropriate selection.

*** Foreign language highly recommended.

**** Any math course at or above the level of College Algebra and Trigonometry (MA5621 highly recommended). See Math Chart.

† PS1151 Child Psychology; PS1152 Adolescent Psychology; PS1210 Developmental Psychology I; PS1211 Developmental Psychology II.

†† Any course beginning with SO prefix.

††† Recommended courses include CT6630 Computer Applications and/or foreign language.

LIBERAL ARTS: Science Options

The four associate in arts degree options in Science are designed as a suggested curricula for students who decide early they would like to earn a bachelor's degree in science. Although these sequences have taken into account prerequisites in science departments at New England universities, they are only suggested course sequences. Students are advised to consult with the Admissions Office/Science Department at the school to which they plan to transfer for their preferred sequence of course electives. The math, chemistry and physics course you take will depend on your high school science background. For some students, it is better to start with a more basic course such as Introductory Chemistry before General Chemistry, College Algebra and Trigonometry before Calculus I, etc. Such introductory courses may not transfer towards a science degree at many colleges/universities. With the advice of a faculty advisor, and even with a decision in the student's second year to become a science major, other course sequences (with some concentration in the sciences) may serve the same purpose for the Liberal Arts transfer students.

LIBERAL ARTS: Biology Option

67-70 credits required for graduation.

| FIRST SEMESTER | | CREDITS |
|------------------------|--|----------------|
| EN4401 | English Composition I | 3 |
| MA5675 | Calculus I for Business/Social/Life Sciences OR | |
| MA5690 | Calculus I | 3/4 |
| BI5515 | Introductory Biology I | 4 |
| CH5501 | General Chemistry I | 4 |
| | Behavioral Science Elective | 3 |
| | | 17/18 |
| SECOND SEMESTER | | CREDITS |
| EN4402 | English Composition II | 3 |
| MA5676 | Calculus II for Business/Social/Life Sciences OR | |
| MA5692 | Calculus II | 3/4 |
| BI5525 | Introductory Biology II OR | |
| | Biology Elective* | |
| CH5502 | General Chemistry II | 4 |
| | History/Government Elective | 3 |
| | | 17/18 |
| THIRD SEMESTER | | CREDITS |
| | Physics Elective** | 4 |
| BI5553 | Microbiology | 4 |
| | Literature Elective | 3 |
| | Language Elective | 3 |
| | Behavioral Science Elective | 3 |
| | | 17 |
| FOURTH SEMESTER | | CREDITS |
| | Physics Elective** | 4 |
| | Biology Elective* OR | |
| | Computer Science Elective*** | 3/4 |
| | Literature Elective | 3 |
| | Language Elective | 3 |
| | History/Government Elective | 3 |
| | | 16/17 |

* BI6605 General Zoology; BI6600 General Botany; SC0000 Research Topics in Science.

** PI5621/PI5622 Applied Physics I & II; PI5623/PI5624 Engineering Physics I & II.

*** CT6630 Computer Applications

70 credits required for graduation.

LIBERAL ARTS: Chemistry Option

| FIRST SEMESTER | | CREDITS | |
|------------------------|--|----------------|--|
| EN4401 | English Composition I | 3 | |
| MA5690 | Calculus I | 4 | |
| CH5501 | General Chemistry I Science Elective | 4 | |
| | Behavioral Science Elective | 3 | |
| | | 18 | |
| SECOND SEMESTER | | CREDITS | |
| EN4402 | English Composition II | 3 | |
| MA5692 | Calculus II | 4 | |
| CH5502 | General Chemistry II | 4 | |
| PI5623 | Engineering Physics I History/Government Elective | 4 | |
| | | 3 | |
| | | 18 | |
| THIRD SEMESTER | | CREDITS | |
| MA5693 | Calculus III | 4 | |
| PI5624 | Engineering Physics II Literature Elective | 4 | |
| | Behavioral Science Elective | 3 | |
| | Language Elective | 3 | |
| | | 17 | |
| FOURTH SEMESTER | | CREDITS | |
| MA5685 | Differential Equations Science Elective | 4 | |
| | Literature Elective | 4 | |
| | History/Government Elective | 3 | |
| | Language Elective | 3 | |
| | | 17 | |

70 credits required for graduation.

LIBERAL ARTS: Earth Science Option

| FIRST SEMESTER | | CREDITS | |
|------------------------|--|----------------|--|
| EN4401 | English Composition I | 3 | |
| MA5690 | Calculus I | 4 | |
| CH5501 | General Chemistry I Science Elective | 4 | |
| | Behavioral Science Elective | 3 | |
| | | 18 | |
| SECOND SEMESTER | | CREDITS | |
| EN4402 | English Composition II | 3 | |
| MA5692 | Calculus II | 4 | |
| CH5502 | General Chemistry II | 4 | |
| PI5623 | Engineering Physics I History/Government Elective | 4 | |
| | | 3 | |
| | | 18 | |

| THIRD SEMESTER | | CREDITS |
|------------------------|---|----------------|
| ES5502 | Physical Geology | 4 |
| MA5693 | Calculus III | 4 |
| PI5624 | Engineering Physics II Literature Elective | 4 |
| | Language/Philosophy/Religion/ Creative Arts Elective | 3 |
| | | 18 |
| FOURTH SEMESTER | | CREDITS |
| ES5501 | Meteorology Literature Elective | 4 |
| | Behavioral Science Elective | 3 |
| | History/Government Elective | 3 |
| | Language/Philosophy/Religion/ Creative Arts Elective | 3 |
| | | 16 |

70 credits required for graduation.

LIBERAL ARTS: Physics Option

| FIRST SEMESTER | | CREDITS |
|------------------------|--|----------------|
| EN4401 | English Composition I | 3 |
| MA5690 | Calculus I | 4 |
| CH5501 | General Chemistry I Science Elective | 4 |
| | Behavioral Science Elective | 3 |
| | | 18 |
| SECOND SEMESTER | | CREDITS |
| EN4402 | English Composition II | 3 |
| MA5692 | Calculus II | 4 |
| CH5502 | General Chemistry II | 4 |
| PI5623 | Engineering Physics I History/Government Elective | 4 |
| | | 3 |
| | | 18 |
| THIRD SEMESTER | | CREDITS |
| MA5693 | Calculus III | 4 |
| PI5624 | Engineering Physics II Literature Elective | 4 |
| | Behavioral Science Elective | 3 |
| | Language Elective | 3 |
| | | 17 |
| FOURTH SEMESTER | | CREDITS |
| MA5685 | Differential Equations | 4 |
| PI5624 | Engineering Physics III Literature Elective | 4 |
| | History/Government Elective | 3 |
| | Language Elective | 3 |
| | | 17 |

LIBERAL ARTS: Social Work Transfer Option

The associate in arts degree option in Social Work is designed for students who wish to begin preparation for a position in public and private social work agencies and/or intend to transfer into a four-year degree program in social work. The course work outlined below provide a solid introduction to liberal arts courses and to the purposes, techniques and problems associated with the field of social work. 62 credit hours are required for graduation.

CREDIT REQUIREMENTS

| | |
|---------|--|
| EN4401/ | |
| EN4402 | English Composition I & II (6 credits) Literature* (6 credits) |
| BI5515/ | |
| BI5525 | Biology I & II (8 credits) |
| HI9904/ | |
| HI9905 | World Civilization I & II** OR |
| HI9901/ | |
| HI9902 | Western Civilization I & II (6 credits)** |
| PH1101 | Introduction to Philosophy (3 credits) Philosophy, Foreign Language, Religion, Fine Arts *** (3 credits) Math † (6 credits) |
| PS1101 | Introduction to Psychology (3 credits) |
| SO3321 | Introduction to Sociology (3 credits) |
| SO3355 | Introduction to Social Welfare (3 credits) |
| PS1210 | Developmental Psychology I OR |
| PS1211 | Developmental Psychology II (3 credits) |
| SO3324 | Cultural Anthropology (3 credits) Social Science Electives†† (6 credits) Free Elective††† (3 credits) |

* Sequential literature courses highly recommended (any courses offered by the English Department which include the word "literature" in the title).

** Inquire at transfer institution to determine appropriate selection.

*** Foreign language highly recommended.

† Math recommended courses are Statistics (MA5506) and any other math course at or above the level of College Algebra & Trigonometry (MA5621). See Math Chart. (Note which math courses do not meet core requirements for Liberal Arts students.)

†† Any PS, SO, HI, GV, or GE prefix course.

††† CO4401 Cooperative Education course highly recommended.

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

LIBERAL ARTS: Teacher Exploration Option

The associate in arts degree option in Teacher Exploration provides students the opportunity to explore teaching as a career option. Along with providing a strong foundation in the arts and sciences through liberal arts courses, students are required to take education courses that will help them prepare for successful transfer to a four-year institution. For admission conditions and prerequisites, contact the Office of Admission. 64-66 credit hours are required for graduation.

FIRST SEMESTER

| CREDITS | |
|---------|--------------------------------|
| EN4401 | English Composition I |
| | 3 |
| HI9904 | World Civilization I |
| | 3 |
| MA5615 | College Algebra OR |
| | 3 |
| MA5621 | College Algebra & Trigonometry |
| | 4 |
| PS1101 | Introduction to Psychology |
| | 3 |
| GE9511 | Introduction to Geography |
| | 3 |

15/16

SECOND SEMESTER

| CREDITS | |
|---------|------------------------------------|
| EN4402 | English Composition II |
| | 3 |
| HI9905 | World Civilization II |
| | 3 |
| MA5506 | Statistics OR |
| | 3 |
| MA5633 | Advanced Algebra & Trigonometry |
| | 4 |
| ED2310 | Introduction to Teaching |
| | 3 |
| ED2322 | Introduction to Teaching Practicum |
| | 1 |
| EN8011 | Public Speaking |
| | 3 |

13/14

THIRD SEMESTER

| CREDITS | |
|---------------------|--|
| Lab Science I† | 4 |
| ED2320 | Issues & Trends in Education |
| ED2321 | Issues & Trends in Education Practicum |
| | 1 |
| Foreign Language I* | 3 |
| Literature | 3 |
| CT6630 | Computer Applications or a higher level course |
| | 3 |

14

FOURTH SEMESTER

| CREDITS | |
|-------------------------|--|
| Lab Science II † | 4 |
| PS1210 | Developmental Psychology I: Childhood & Adolescence |
| | 3 |
| Foreign Language II* | 3 |
| EN8401 | Children's Literature |
| | 3 |
| Liberal Arts Elective** | 3 |

16

† Choose prefixes: BI, CH, PI, SC5511/SC5512 or ES5501/ES5502

* Choose from American Sign Language, French, Spanish, German, Italian

** In selecting the elective courses, students will be guided by their anticipated choice of discipline major, the level of teacher certification to be sought and the aforementioned program requirements. For all of the above courses, students must confer/consult: Department of Education certification requirements, specific transfer institutions and the NECC teacher Exploration requirements.

NOTE: Students must submit to a CORI/SORI before beginning a practicum. All students entering this option must submit a report of medical examination by a physician and documentation of a completed Mantoux (tuberculosis) test and MMR inoculation prior to beginning practicums.

LIBERAL ARTS: Theater Option

The associate in arts degree option in Theater offers several introductory courses for academic credit over a two-year period. Students need not be planning a career in theater to benefit. Theater study and experience is appropriate for those seriously interested professionally as well as students seeking elective credits. Because of the size of the classes and the various curricular and extracurricular theater activities, the student has an excellent opportunity for on-stage or backstage experience. This can contribute to greater and more rapid personal growth. 62 credit hours are required for graduation.

FIRST SEMESTER

| | | CREDITS |
|--------|--|---------|
| EN4401 | English Composition I | 3 |
| HI9901 | Western Civilization I | 3 |
| TH7765 | Introduction to Theater OR Theater Elective* | 3 |
| TH7769 | Acting | 3 |
| | Free Elective | 3 |
| | | 15 |

SECOND SEMESTER

| | | CREDITS |
|--------|----------------------------------|---------|
| EN4402 | English Composition II | 3 |
| HI9902 | Western Civilization II | 3 |
| HU4000 | Introduction to Humanities | 3 |
| TH7768 | Scene Study OR Theater Elective* | 3 |
| EN8011 | Public Speaking | 3 |
| | | 15 |

THIRD SEMESTER

| | | CREDITS |
|-----------------------------|--|---------|
| Natural Science | | 4 |
| Literature Elective | | 3 |
| Behavioral Science Elective | | 3 |
| Theater Elective* | | 3 |
| Math Requirement** | | 3 |
| | | 16 |

FOURTH SEMESTER

| | | CREDITS |
|-----------------------------|--|---------|
| Natural Science | | 4 |
| Literature Elective | | 3 |
| Behavioral Science Elective | | 3 |
| Theater Elective* | | 3 |
| Math Requirement** | | 3 |
| | | 16 |

* Theater courses available for theater electives, other than TH7795

History of the Theater, are offered as directed studies, usually in conjunction with productions of the NECC Top Notch Players. A directed study course is a participatory, self-directed course done under the supervision of the instructor. Theater courses are: TH7775 Directing, TH7799 Rehearsal & Performance, TH7760 Stagecraft.

** See Liberal Arts Math requirement.

NOTE: Students wishing to take a directed study course in theater must speak to the Program Coordinator at the beginning of the semester. Courses not offered during a particular semester may also be taken for directed study.

LIBERAL ARTS: Women's Studies Option

The associate in arts degree option in Women's Studies offers an opportunity to understand many familiar subjects from the perspective of women. The Women's Studies Option prepares you with all the traditional skills of a liberal arts education: practice in critical reading and thinking, practice in clear, well-organized writing, and background in a number of academic disciplines. Women's Studies students may transfer to four-year liberal arts degree programs in any liberal arts major. Many four-year colleges also offer degrees in Women's Studies. Students who enter the work world after their Associates degree will find themselves well prepared to transfer their skills in writing, research and thinking to a variety of jobs. 62 credit hours are required for graduation.

Part-time Option: Students who prefer to take fewer courses in a semester may study on a part-time basis and complete the program in a longer period of time.

Curriculum: The Women's Studies Option of the Liberal Arts degree program includes the following seven courses, distributed among three departments in two Divisions (Humanities and Social Sciences). Complete descriptions of these courses are in the College Catalog.

| | |
|--------|---|
| EN8882 | Literature: Women's Lives: Recorded & Imagined |
| EN8883 | Women in Literature & Life |
| EN8884 | Literature: 20th Century Women in Film |
| GV3320 | Women & the Law |
| HI9917 | The Family in History |
| HI9962 | Women's History: Giving the Majority Its Past |
| SO3359 | Women & Society |

Not all of these courses will be offered every semester. Some may be offered in alternate years. Other new or experimental courses, appropriate to the option but not appearing in the catalog, may be offered. Students should consult their advisors about these Special Topics offerings each semester. Cooperative Education courses, with approved placements and approval of the Women's Studies Option Coordinator, may also be used to fulfill the option.

Each of the Women's Studies courses fulfills a requirement within the Liberal Arts degree.

LA Requirement in History/Government (6 credits): choose among GV3320 Women & the Law, HI9917 The Family in History, HI9962 Women's History: Giving the Majority Its Past.

LA Requirement in Literature (6 credits): choose among EN8882 Literature: Women's Lives—Recorded & Imagined, EN8883 Women in Literature & Life, EN8884 Literature: 20th Century Women in Film.

LA Requirement in Behavioral Science (6 credits): partially fulfilled by SO3359 Women & Society.

Any of these courses may also be used to complete the 18 credits of liberal arts electives in the Liberal Arts Degree program.

Completion of any six of these courses, or any five and one approved Special Topics course, will constitute the Women's Studies Option.

LIBERAL ARTS: Writing Option

The associate in arts degree option in Writing is designed to give students a solid grounding in a variety of writing skills, while providing opportunities for students to try out writing and other communications skills for particular purposes with various audiences. This option emphasizes building on existing skills, developing individual style, and exploring career applications of writing. It is an appropriate preparation for transfer to B.A. programs in English, writing, communications and other liberal arts majors; it may also prepare students for entry level jobs requiring excellent writing skills. Students not planning to transfer are urged to consider co-op as an elective to provide field experience in their chosen writing markets. 62 credit hours are required for graduation. The Writing Option of the LA Degree requires the Liberal Arts Core Requirements in the following areas:

Credits

| | |
|--|---|
| EN4401 & EN4402 English Composition I & II | 6 |
| Mathematics† | 6 |
| Laboratory Sciences† | 8 |

†(See requirements under LA Degree)

The following 3 required courses are the heart of the Writing Option:

| | |
|-----------------------------|---|
| EN4403 Creative Non-fiction | 3 |
| EN4405 Creative Writing | 3 |
| EN8011 Public Speaking | 3 |

*LA Requirement in Literature 6
Women's Literature, ethnic/minority literature or Non-Western literature are recommended.

*LA Requirement in History/Government 6
Courses with international or multi-cultural perspective are recommended.

*LA Requirement in Behavioral Science 6
Courses with international or multi-cultural perspective are recommended.

*One course in any **one** of these areas **must** be multi-cultural or international in perspective, or **must** involve women's, ethnic, minority or non-Western studies.

LA Requirement in Foreign Language/Philosophy/
Religion/Creative Arts 6

The following courses are strongly recommended to fulfill this requirement; they are chosen to emphasize variety in means of communication: FA7020 Introduction to Creative Arts; FA7024 Dance Composition; MU7110 Chorus I; TH7796 Acting; TH7785 Mime; TH7799 Rehearsal & Performance; two semesters of a foreign language.

Electives 9

Besides any of the courses listed under LA requirements, the following courses are recommended for the necessary elective credits: EN5101 Journalism I; EN5333 Broadcast Reporting; EN4676 Technical Writing; EN8020 Interpersonal Communication; LN1001 Introduction to Language; CO4401 Cooperative Education I; a literature elective.

PARALEGAL STUDIES†

Transfer Option & Career Option

The associate in science degree program in Paralegal Studies combines a liberal arts foundation with a career concentration in the paralegal area. Students have an opportunity to explore the field of law and to gain knowledge and develop essential skills to perform a wide range of supportive legal functions. The associate degree program is split into two options: Transfer Option and Career Option.

PARALEGAL DEGREE TRANSFER OPTION

The Transfer Option (62/63 credits required) is designed for students wishing to transfer to another institution to earn a Bachelor's Degree. This option is designed to maximize the transferability of credits.

| FIRST SEMESTER | | CREDITS |
|------------------------|---|-----------------------|
| EN4401 | English Composition I | 3 |
| CT6630 | Computer Applications OR higher level computer course | 3 |
| LW6601 | Introduction to Paralegalism | 3 |
| PH1150 | Practical Logic | 3 |
| GV3300 | Introduction to Law | 3 |
| | TOTAL CREDITS 15 | |
| SECOND SEMESTER | | CREDITS |
| EN4402 | English Composition II | 3 |
| LW6671 | Legal Research & Writing I Behavioral Science Elective | 3 |
| GV3315 | Civil Rights & Liberties College Algebra, College Algebra & Trigonometry, or higher level math | 3 3/4 |
| | TOTAL CREDITS 15/16 | |
| THIRD SEMESTER | | CREDITS |
| LW6672 | Legal Research & Writing II | 3 |
| LW6661 | Litigation Humanities Elective Paralegal Elective* Natural Science | 3 3 3 4 |
| | TOTAL CREDITS 16 | |
| FOURTH SEMESTER | | CREDITS |
| | Literature Course Paralegal Elective* Paralegal Elective* Paralegal Elective* Natural Science | 3 3 3 3 4 |
| | TOTAL CREDITS 16 | |

TOTAL CREDITS REQUIRED FOR GRADUATION 62/63

PARALEGAL DEGREE CAREER OPTION

The Career Option (61 credits required) is designed for students who plan to seek employment after receiving their associate degree and do not plan to further their education. This option focuses on the practical aspects of the profession and, because Career Option students do not plan to transfer to a four-year institution, this option offers more flexibility with electives.

| FIRST SEMESTER | | CREDITS |
|------------------------|--|-----------------------|
| EN4401 | English Composition I | 3 |
| CT6630 | Computer Applications OR higher level computer course | 3 |
| LW6601 | Introduction to Paralegalism | 3 |
| PH1150 | Practical Logic | 3 |
| GV3300 | Introduction to Law | 3 |
| | TOTAL CREDITS 15 | |
| SECOND SEMESTER | | CREDITS |
| EN4402 | English Composition II | 3 |
| LW6671 | Legal Research & Writing I Behavioral Science Elective | 3 |
| GV3315 | Civil Rights & Liberties Liberal Arts Math I or II or higher | 3 3/4 |
| | TOTAL CREDITS 15/16 | |
| THIRD SEMESTER | | CREDITS |
| LW6672 | Legal Research & Writing II | 3 |
| LW6661 | Litigation Liberal Arts Elective Paralegal Elective* Natural Science | 3 3 3 4 |
| | TOTAL CREDITS 16 | |
| FOURTH SEMESTER | | CREDITS |
| | Free Elective Paralegal Elective* Paralegal Elective* Paralegal Elective* LW6680 Practicum | 3 3 3 3 3 |
| | TOTAL CREDITS 15 | |

TOTAL CREDITS REQUIRED FOR GRADUATION 61

NOTES APPLICABLE TO PARALEGAL STUDIES ASSOCIATE DEGREE PROGRAM:

† While paralegals assist attorneys with a wide range of tasks, paralegals must not set fees, give legal opinions or advice, or represent a client before a court or agency.

* PARALEGAL ELECTIVES:

LW6653 Real Estate Law, LW6662 Wills, Estates and Trusts, LW6663 Corporate Law, LW6664 Family Law, LW6666 Tort Law, LW6667 Computer Applications in Law and any other special topics elective courses designed for Paralegal Program students that may be proposed in the future.

LW COURSES: All law-specialty courses (LW Prefix) are taught by experienced attorneys. **This program is approved by the AMERICAN BAR ASSOCIATION.** Students must obtain a minimum grade of C in all law specialty courses (LW prefix) to

meet Paralegal Program graduation requirements. Credit for law specialty courses taken more than 6 years prior to completion of the Paralegal Studies program will not be awarded, unless the student's proficiency in the area can be demonstrated. Students interested in transferring credits taken at Northern Essex to a B.A. in Paralegal Studies, should consult with the receiving institution. Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

RADIOLOGIC TECHNOLOGY

The associate in science degree program in Radiologic Technology closely integrates all of the technical content in the program and provides opportunities to put classroom-learned techniques to work under supervision in the clinical area. This program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). You will be ready to take the national board examination sponsored by the American Registry of Radiologic Technologists when you graduate. The successful completion of this exam qualifies you to be employed as a Registered Radiologic Technologist. In order to progress in the program, a grade of "C" or better is required in each Radiologic Technology course. The Radiologic Technology program requires that all students be CPR Certified (Basic Life Support-Form C) prior to beginning the program. This may be accomplished by participating in CPR instruction offered by the American Heart Association, the American Red Cross, local hospitals or other qualified agencies. It is also expected that students maintain certification throughout their educational program in Radiologic Technology. 70 credit hours are required for graduation.

Program Prerequisites: Two science courses (one must be in biology, anatomy and physiology, chemistry or physics); and Algebra I & II. The sequence of courses allows this program to be completed in two years (21 consecutive months) by full-time students.

Admissions Condition: The Program Coordinator (director) will assign each qualified applicant to a clinical site where it is anticipated that the applicant would complete some of his or her clinical practicum observation of radiologic procedures and tour the Radiology Department. Upon completion of the observation and tour, the clinical instructor will complete an assessment of the applicant, that will be considered by the College in making the admission decision.

| FIRST SEMESTER | | CREDITS |
|-----------------|-------------------------------------|---------|
| EN4401 | English Composition I | 3 |
| BI5519 | Anatomy & Physiology I | 4 |
| RTA101 | Radiologic Procedures & Exposure I | 4 |
| RTA191 | Clinical Practicum I | 2 |
| | Computer Applications Requirement | 3 |
| | | 16 |
| SECOND SEMESTER | | CREDITS |
| EN4402 | English Composition II | 3 |
| BI5520 | Anatomy & Physiology II | 4 |
| PI6511 | Radiologic Science | 3 |
| RTA102 | Radiologic Procedures & Exposure II | 4 |
| RTA192 | Clinical Practicum II | 2 |
| | | 16 |

| SUMMER SESSION** | CREDITS |
|---|---------|
| RTA293 Clinical Practicum III | 5 |
| THIRD SEMESTER | |
| RTA201 Radiologic Equipment & Quality Assurance | 3 |
| RTA202 Advanced Radiographic Imaging | 3 |
| RTA294 Clinical Practicum IV | 3 |
| BI5530 Fundamentals of Disease Process | 3 |
| Behavioral Science Requirement †† | 3 |
| | 15 |
| FOURTH SEMESTER | CREDITS |
| RTA203 Radiobiology & Protection | 3 |
| RTA204 Special Radiologic & Angiographic Procedures | 3 |
| RTA205 Computer Imaging & Cross Sectional Anatomy | 3 |
| RTA295 Clinical Practicum V | 3 |
| Liberal Arts/Math Elective††† | 3 |
| Humanities Requirement† | 3 |
| | 18 |

** Twelve consecutive weeks of continued clinical practicum at affiliate hospitals. A total of 70 credit hours with a grade of "C" or better in each Radiologic Technology course is required for graduation.

† Select one: Philosophy, Literature, Introduction to Humanities or Foreign Language.

†† Select one: Introduction to Psychology, Developmental Psychology I: Childhood and Adolescence, Developmental Psychology II: Adulthood and Aging, Introduction to Sociology, Death and Dying, Race and Ethnic Relations

††† Students intending to transfer are strongly encouraged to elect an appropriate college level mathematics course.

Student Liability Insurance: All Radiologic Technology students are required to carry student liability insurance. The premium is to be paid prior to the beginning of classes. Students may not participate in the Radiologic Technology program without malpractice insurance coverage.

Health: Radiologic Technology students are required to complete a health evaluation prior to final acceptance to the Radiologic Technology program. The college's Student Health Service will designate when this information is due at the college.

CORI (Criminal Offender Record Information) and/or SORI (Sex Offender Record Information) checks are required prior to participation in the clinical component of the program.

REGISTERED NURSING: Day/Evening Options

The associate in science degree program in Registered Nursing is approved by the Massachusetts Board of Registration in Nursing and accredited by the National League for Nursing. This comprehensive, demanding and rewarding program requires a strong commitment from students to complete the course of study. 68 credit hours (34 nursing credits and 34 general education credits) are required for graduation. Once accepted, students complete the program in a 2-year time frame. It is possible for students to fulfill the general education requirements in either the day or evening. The Registered Nursing program requires that all students be C.P.R. Certified (Level of Health Care Provider) prior to clinical experience and maintain certification throughout the nursing program. C.P.R. instruction is offered by the American Heart Association, the American Red Cross or local hospitals. Graduates are prepared to write the State Board Examination for licensure as a Registered Nurse. (The Application for Registration as a Professional Nurse With Examination includes the following question – "Court Record: 'Have you ever been convicted by Court of Law? Yes ____ No ____ If "yes," please enclose explanation stating date, charge, disposition.'") Criminal Offender Record Information (CORI) Checks are required prior to participation in the clinical component of nursing courses.

Program Prerequisites: A high school diploma or equivalency certificate (GED) is required for admission to the program. Two years of science (one must be a laboratory course in chemistry). Students who have completed Anatomy & Physiology I & II (at the college level) with a minimum grade of "C" shall not be required to complete the high school chemistry prerequisite as consideration for acceptance into the Registered Nurse Program.

Program Acceptance: Prior to acceptance, assessment testing including a nursing math section is required of all applicants to nursing programs. Priority for acceptance is given to students who have completed at least three of the general education courses required in the R.N. Program with a grade of 2.0 (C) or better in addition to completion of at least one of the required sciences at college level (A&P I, A&P II or Microbiology) with a grade of 3.0 (B) or better. Students who have completed two of the required sciences with a grade of 2.3 (C+) or better are also reviewed for acceptance. We strongly encourage completion of all three sciences prior to beginning the Nursing Program.

THE CURRICULUM

Sequence of Courses: Courses are planned in a sequential manner in order for students to integrate knowledge from general education courses. If students are unable to complete general education courses sequentially, they must gain written permission from their nursing faculty advisor. It is the responsibility of students to be knowledgeable regarding the sequence of courses and to plan their schedule accordingly.

Grading: The final grade in a Nursing course is based on classroom theory and clinical performance. A failure in either area constitutes failure for the course. Students must maintain a "C" in

Nursing courses to proceed to the next semester. Graduation from the Registered Nursing program is contingent on maintaining at least a grade of "C" in all Nursing courses and a QPA (Quality Point Average) of 2.0.

Travel: Students are responsible for their own transportation to and from clinical agencies. Clinical experience is scheduled twice a week and may include day and evening clinical experiences. Students must be prepared for these alternately scheduled hours. **NOTE:** On occasion, conferences may be scheduled at the college during clinical hours, requiring students to return to the college from the clinical agency.

Student Professional Liability Insurance: All Registered Nursing students are required to hold student professional liability insurance. The modest premium is included in the tuition for nursing courses each fall.

Health: Registered Nursing students are required to complete a health evaluation including documentation of required immunizations as a condition of final acceptance to the Registered Nursing program. Students desiring a career in Registered Nursing must be physically and emotionally capable of assuming responsibility for client care in health care institutions.

Standardized Achievement Exams: An end of program examination is required as an integral aspect of the curriculum for graduation. The test is designed to assist students to evaluate their preparation for the licensing examination. A testing fee is charged with registration for Nursing IV.

Advanced Placement: The Registered Nursing Program provides advanced placement opportunity. Licensed Practical Nurses with recent clinical experience and with appropriate general education courses completed may apply for advanced placement in the Registered Nurse Program into Nursing II or Nursing III. See an Admissions representative for more information.

CURRICULUM † (TOTAL 68 CREDITS)

NOTE: The following curriculum plans demonstrate the program structure for the 2-year program. The majority of our students design three-to-five year plans and complete most of their general education courses prior to Nursing I. For more information, see an Admissions representative.

| FALL SEMESTER | | CREDITS |
|---------------|----------------------------|---------|
| NS6603 | Nursing I | 8 |
| BI5519 | Anatomy & Physiology I | 4 |
| EN4401 | English Composition I | 3 |
| PS1101 | Introduction to Psychology | 3 |
| | TOTAL CREDITS | 18 |

Prerequisite: Acceptance into the Registered Nurse Program.

| SPRING SEMESTER | | CREDITS |
|-----------------|----------------------------|---------|
| NS6604 | Nursing II | 8 |
| BI5520 | Anatomy & Physiology II | 4 |
| EN4402 | English Composition II | 3 |
| PS1210 | Developmental Psychology I | 3 |
| | TOTAL CREDITS | 18 |

Prerequisites: NS6603 Nursing I must be completed with a grade of C or better to continue to NS6604 Nursing II and prior completion of concurrent first semester courses.

| FALL SEMESTER | | CREDITS |
|---------------|-----------------------------|---------|
| NS6653 | Nursing III | 8 |
| SO3321 | Introduction to Sociology | 3 |
| BI5553 | Microbiology | 4 |
| PS1211 | Developmental Psychology II | 3 |
| | TOTAL CREDITS | 18 |

Prerequisite: NS6604 Nursing II must be completed with a grade of C or better to continue to NS6653 Nursing III and prior completion of concurrent second semester courses.

| SPRING SEMESTER | | CREDITS |
|-----------------|--|---------|
| NS6654 | Nursing IV | 10 |
| | Humanities Elective* | 3 |
| CT3301 | Computer Literacy for Health Professionals | 1 |
| | TOTAL CREDITS | 14 |

Prerequisite: NS6653 Nursing III must be completed with a grade of C or better to continue to NS6654 Nursing IV and prior completion of concurrent semester courses. In order to graduate NS6654 Nursing IV must be completed with a grade of C or better and the Standardized Achievement Test must be completed.

* Humanities elective are to be chosen from courses offered by the departments of Creative Arts and/or English and/or Foreign Languages, Philosophy & Religion.

† Students are expected to follow the planned curriculum sequence in order to be successful in the Registered Nurse Program.

RESPIRATORY CARE

The associate in science degree program in Respiratory Care incorporates all of the learning objectives of the entry level Certificate program and goes beyond to present the theoretical knowledge and clinical procedural skills required for employment as an advanced level practitioner. The respiratory care practitioner specializes in the application of scientific knowledge and theory to practical clinical problems of respiratory care. They are qualified to assume primary responsibility for all respiratory care modalities and may be required to exercise considerable independent clinical judgment in the respiratory care of patients under the direct or indirect supervision of a physician. Graduates are prepared to sit for the examination given by the National Board for Respiratory Care to become a Registered Respiratory Therapist. This program is fully accredited by the Committee on Accreditation for Respiratory Care and the Commission on Accreditation of Allied Health Education Programs. In order to progress in the program, a grade of C or better is required in each Respiratory Care course. 70 credit hours are required for graduation. See a representative in the Office of Admission for additional admissions criteria for this program.

| FIRST SEMESTER | | CREDITS |
|----------------|----------------------------------|---------|
| BI5519 | Anatomy & Physiology I | 4 |
| EN4401 | English Composition I | 3 |
| RS6614 | Introduction to Respiratory Care | 7 |
| RS6615 | Respiratory Practicum I | 2 |
| | | 16 |

| SECOND SEMESTER | | CREDITS |
|-----------------|-------------------------------------|---------|
| BI5520 | Anatomy & Physiology II | 4 |
| RS6629 | Respiratory Pharmacology | 2 |
| RS6624 | Respiratory Procedures & Assessment | 7 |
| RS6625 | Respiratory Practicum II | 4 |
| | | 17 |

| THIRD SEMESTER | | CREDITS |
|----------------|--|---------|
| EN4402 | English Composition II | 3 |
| BI5553 | Microbiology | 4 |
| RS6644 | Ventilator Management and Pulmonary Function Testing | 7 |
| RS6645 | Respiratory Practicum III | 4 |
| | | 18 |

| FOURTH SEMESTER | | CREDITS |
|-----------------|--|---------|
| | Humanities Elective OR Social Science Elective | 3 |
| RS6659 | Respiratory Care Seminar | 2 |
| RS6654 | Respiratory Intensive Care | 7 |
| RS6655 | Respiratory Practicum IV Elective | 4 |
| | | 3 |
| | | 19 |

Student Professional Liability Insurance: All Respiratory Care students are required to carry student professional liability insurance. The premium is to be paid prior to the beginning of classes. Students may not participate in the Respiratory Care program without this insurance coverage.

Health: Respiratory Care students are required to complete a health evaluation prior to final acceptance to the Respiratory program. The college's Student Health Service will designate when the information is due at the college.

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, are required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

Certificate Program Listing

| | |
|--|----|
| Alcohol/Drug Abuse Counseling | 92 |
| Cancer Registry | 92 |
| Coding | 93 |
| Community Support Human Service Practitioner | 93 |
| Computer-Aided Drafting | 94 |
| Computer Applications | 95 |
| Computer Networking Certificate | 96 |
| Computer Service Specialist Certificate | 96 |
| Deaf Studies: Sign Language Interpreter | 97 |
| Dental Assistant | 97 |
| Dialysis Patient Care Technician | 98 |
| Electronic Equipment Technology | 99 |
| Graphic Design/Desktop Publishing | 99 |

| | |
|--|-----|
| Legal Administrative | 100 |
| Medical Assistant | 100 |
| Medical Billing | 101 |
| Medical Terminology & Transcribing | 102 |
| Nursing: Practical | 102 |
| Office Automation | 103 |
| Office Skills | 103 |
| Paralegal Studies | 104 |
| Respiratory Care | 104 |
| Semiconductor Manufacturing | 105 |
| Total Quality Management | 105 |
| Travel & Tourism Management | 106 |
| Web Page Design & Development | 106 |

Criminal Offender Record Information & Sex Offender Record Information Checks

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, may be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check. Depending on the contents of a student's CORI or SORI, participation in an academic program or a cooperative education experience or clinical or practicum affiliation related thereto may be denied. CORI checks may be performed pursuant to Mass. General Law Chapter 6, Sections 167-178B, consistent with guidelines promulgated by the executive Office for Health and Human services, and the Commonwealth's Department of Public Health. SORI checks may be performed pursuant to Mass. General Law Chapter 6, Section 178C.

For more information please contact the Registrar at 978-556-3700.

ALCOHOL/DRUG ABUSE COUNSELING CERTIFICATE

The one-year certificate program in Alcohol/Drug Abuse Counseling is designed to provide opportunity for students to learn the theory and develop addiction counselor skills to assist persons with substance abuse disability toward recovery from addiction. The curriculum content includes knowledge of the human service/substance abuse delivery systems, community networking and referrals, drugs of abuse, treatment modalities, group dynamics, counseling techniques, confidentiality, and professional ethics of substance abuse counselors. Supervised clinical experiences in alcohol/drug abuse services are an integral part of the program and prepares graduates for positions as substance abuse counselors. The program is based on the National Addiction Counselor Competencies and the National Community Support Skill Standards. Students who complete the program may begin the process toward substance abuse certification in Massachusetts. The program is approved by the Council for Standards in Human Service Education. 27 credits are required for the certificate, all of which may be applied toward the Associate Degree in Human Services. See a representative in the Office of Admission for additional admissions criteria for this program.

| FIRST SEMESTER | CREDITS |
|--|----------------|
| MH2111 Introduction to Human Services | 3 |
| MH2133 Observation & Recording of Human Services Programs | 1 |
| MH2170 Alcohol & Drug Abuse | 3 |
| MH2168 Human Services Practicum I in Alcohol/Drug Abuse Services | 4 |
| MH2147 Group Dynamics | 3 |
| | 14 |

| SECOND SEMESTER | CREDITS |
|---|----------------|
| MH2171 Counseling Techniques | 3 |
| MH2169 Human Services Practicum II in Alcohol/Drug Abuse Services | 4 |
| MH2155 Modalities of Treatment | 3 |
| Behavioral Science Elective | 3 |
| | 13 |

NOTE: All courses with an MH prefix are restricted to students enrolled in the Human Services, Community Residence Manager or Alcohol/Drug Abuse Counseling programs. Other students may take MH prefix courses depending upon class size with written permission of the coordinator. Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

CANCER REGISTRY CERTIFICATE

The one-year certificate program in Cancer Registry is designed to prepare individuals for a career as a Cancer Registrar. Through a series of technical courses and a practical application in a clinical setting located off campus students will acquire knowledge essential in the collection and provision of cancer data. This certificate will help advance graduates of the program toward receiving credentials as a Certified Tumor Registrar (CTR). They must first complete job requirements (post-graduation), and then may choose to sit for the certification examination of the National Cancer Registrar Association (NCRA). Students will develop skills in data collection, record management and analysis of cancer data. Job opportunities are available in a variety of health care settings as well as State and Regional Registries. 29 credits are required for the certificate.

| FIRST SEMESTER | CREDITS |
|--|----------------|
| EN4401 English Composition I | 3 |
| MR6605 Introduction to Medical Language I | 3 |
| BI5519 Anatomy & Physiology I | 4 |
| MR1101 Introduction to Cancer and Its Management | 2 |
| CT6630 Computer Applications | 3 |
| | 15 |

| SECOND SEMESTER | CREDITS |
|--|----------------|
| MR6606 Introduction to Medical Language II | 3 |
| BI5520 Anatomy & Physiology II | 4 |
| MR2101 Cancer Coding, Statistics & Epidemiology | 3 |
| MR2102 Organization & Operation of a Cancer Registry | 2 |
| | 12 |

| SUMMER or THIRD SEMESTER | CREDITS |
|-----------------------------------|----------------|
| MR2190 Cancer Registry Practicum* | 2 |

* Student must have student liability insurance. Student is responsible for transportation to practicum training site. This course must be taken on completion of all other course work. Practicum must be concluded no later than six months after completion of all other course work.

CODING CERTIFICATE

The one-year certificate program in Coding has been designed for students with no background in coding and classifying diseases and procedures. Upon completion students may apply for entry level positions as coders in a variety of health care settings with flexible hours and a challenging workload. Credits in this program are fully applicable to the associate degree in Health Information Technology Program. 21 credit hours are required for the certificate.

FIRST SEMESTER

| | CREDITS |
|---|---------|
| MR6605 Introduction to Medical Language I | 3 |
| BI5519 Anatomy & Physiology I | 4 |
| | 7 |

SECOND SEMESTER

| | CREDITS |
|--|---------|
| MR6606 Introduction to Medical Language II | 3 |
| BI5520 Anatomy & Physiology II | 4 |
| BI5530 Fundamentals of Disease Process | 3 |
| | 10 |

SUMMER SEMESTER †

| | CREDITS |
|--|---------|
| MR6629 Medical Coding & Classification Systems | 3 |
| MR6630 *Coding Practicum | 1 |
| | 4 |

* To be completed off campus at a health care facility site. Student must provide own transportation.

† Summer session courses offered only in the evening.

NOTE: Malpractice insurance is necessary.

COMMUNITY SUPPORT HUMAN SERVICE PRACTITIONER CERTIFICATE

The one-year certificate program in Community Support Human Service Practitioner is designed to provide opportunity for students to learn the theory and develop community support skills to assist persons with emotional disability, mental illness, developmental disability, and substance abuse to improve their quality of life and integrate into the mainstream of society. The curriculum content includes knowledge of human services, community networking and referrals, supportive counseling, teaching daily living skills (self care, social integration, community living skills, and money management), treatment modalities, principles of behavior management, group dynamics, confidentiality, and professional ethics of the human service practitioner. Supervised clinical experiences in residential programs, home support services, shelters, and independent living programs. The Program contains the National Community Support Skills standards and is approved by the Council for Standards in Human Service Education. 33 credits are required for the certificate, all of which may be applied toward the Associate Degree in Human Services. See a representative in the Office of Admission for additional admissions criteria for this program.

FIRST SEMESTER

| | CREDITS |
|---|---------|
| EN4401 English Composition I | 3 |
| MH2111 Introduction to Human Services | 3 |
| GV3310 American Government & Politics | 3 |
| MH2133 Observation & Recording of Human Services Programs | 1 |
| MH2147 Group Dynamics | 3 |
| MH2145 Human Services Practicum in Residential Services I | 4 |
| | 17 |

SECOND SEMESTER

| | CREDITS |
|---|---------|
| EN4402 English Composition II | 3 |
| PS1101 Introduction to Psychology | 3 |
| MH2156 Behavior Management Principles & Techniques Elective | 3 |
| MH2146 Human Services Practicum in Residential Services II | 4 |
| | 16 |

NOTE: All courses with an "MH" prefix are restricted to students enrolled in the Human Services, Community Residence Manager or Alcohol/Drug Abuse Counseling programs. Other students may take MH prefix courses, depending upon class size, with written permission of the coordinator. Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

COMPUTER-AIDED DRAFTING

CERTIFICATE

The thirty-week certificate program in Computer Aided Drafting (CAD) is designed to give students a thorough background in engineering drafting, experience in the use of a CAD system, and knowledge of how CAD fits into Computer Integrated Manufacturing. A minimum of 25 credit hours are required for the certificate. Prerequisite: Two years of high school algebra or MA0040 Basic Algebra II or equivalent

| FIRST SEMESTER | | CREDITS |
|----------------|---------------------------------|---------|
| ET6600 | Engineering Drafting OR | 3 |
| ET6601 | Engineering Design Graphics | 2 |
| CT6630 | Computer Applications OR | |
| CT6632 | Data Management Applications | 3 |
| MA5621 | College Algebra & Trigonometry* | 4 |
| CT6670 | Introduction to CAD/CAM | 3 |
| TW6600 | Keyboarding for Computers ** | 1 |
| | | 13/14 |

| SECOND SEMESTER | | CREDITS |
|-----------------|-------------------------|---------|
| CT6672 | Computer Aided Drafting | 3 |
| EN4401 | English Composition I | 3 |
| | Elective*** | 3/4 |
| | Elective*** | 3/4 |
| | | 12/14 |

* Students with a more advanced math background may substitute appropriate courses.

** For students without strong typing skills.

*** Recommended alternatives for electives:

CO4401 Cooperative Education

CT6601 Fundamentals of Digital Logic

CT6610 Introduction to Programming & Problem Solving

CT6620 Programming I

CT6632 Data Management Applications

CT6642 Integrated Computer Applications

CT6682 Computer Applications in Engineering & Technology

FA7096 Introduction to Graphic Design

FA7098 Illustration

COMPUTER APPLICATIONS CERTIFICATE

This one-year certificate program is designed to provide students with the skills necessary to operate a personal computer in the work environment or at home. The category and general electives provide the student with an opportunity to select from one of the course sequences or minors, or any other discipline of their choice. Successful completion of this certificate program prepares the student for entry-level jobs in a wide variety of employment settings. This certificate program is also intended for individuals with previous college-level experience who wish to upgrade their computer skills. A total of 24 credit hours are required for the certificate. **Program Prerequisite:** TW6600 Keyboarding for Computers I or equivalent skills and MA0030 Basic Algebra I or equivalent

| FIRST SEMESTER | | CREDITS |
|------------------------|--|----------------|
| CT6630 | Computer Applications | 3 |
| | OR | |
| | Computer Application Sequence Elective* | |
| CT5501 | Personal Computer Maintenance/Repair Elective OR | 3 |
| | Document Processing** | 3 |
| | Category I Elective*** | 3/4 |
| | | 12/13 |
| SECOND SEMESTER | | CREDITS |
| CT6642 | Integrated Computer Applications | |
| | OR | |
| | Computer Application Sequence Elective* | 3 |
| EN4401 | English Composition I | 3 |
| | Category I Elective*** | 3/4 |
| | Category II Elective**** | 3/4 |
| | | 12/14 |

* Students with applications background should choose another course from the Computer Application Sequence listed.

** Students should have a keyboarding skill of 25 words per minute with no more than one error per minute or TW6650 Document Processing must be taken in the first semester.

*** Category I Elective: Two courses must be selected from the recommended Course Sequences/Options listed below.

**** Category II elective: One course from the following:

CT6654 The Internet & Web Page Development (HTML)

CT6632 Data Management Applications or

CT6681 Advanced Database Management Software Math course starting at the level of MA5615 College Algebra

NOTE: Electives may not include any developmental courses such as Basic Math, Basic Algebra I & Basic Algebra II, Basic Reading or Basic Writing.

Course Sequence or Options:

Note: Courses are listed in prerequisite order.

COMPUTER SOFTWARE APPLICATIONS:

Computer Application Sequence:

- CT3310 Computers for Beginners
- CT6630 Computer Applications
- CT6642 Integrated Computer Applications
- CT6632 Data Management Applications
- CT6681 Advanced Database Management Software

Computer Aided Drafting Sequence:

- ET6600 Engineering Drafting or
- ET6601 Engineering Design Graphics
- CT6670 Introduction to CAD/CAM
- CT6672 Computer Aided Drafting

Macintosh Sequence:

- FA7121 Macintosh Design
- FA7122 Publication Design
- FA7123 Publication Design II
- FA7126 Advanced Publication Design (QuarkXPress)

COMPUTER HARDWARE,

NETWORKS, & OPERATIONS:

Computer Hardware Sequence:

- CT6601 Fundamentals of Digital Logic
- CT6603 Digital Logic Laboratory
- ET6690 Microcomputers

Computer Networks Sequence:

- CT5501 Personal Computer Maintenance & Repair
- CT6645 Introduction to Computer Networks
- CT6646 Computer Networks II

Computer Operations Sequence:

- CT6626 Intro to Information Processing
- CT6641 Intro to Operating Systems
- CO4401 Cooperative Education I

COMPUTER PROGRAMMING:

Computer Programming Sequence:

- CT6610 Introduction to Programming & Problem Solving
- CT6626 Intro to Information Processing
- CT6665 Visual Basic Programming
- CT6620 Programming I

OTHER

Your Own Sequence:

Select your own group of courses from another subject area or discipline. For example real estate, law, banking, journalism, business, liberal arts, electronics, science, human services, etc.

COMPUTER NETWORKING CERTIFICATE

This one-year certificate program is designed to provide students with the skills necessary to install, configure and manage hardware and software used in local area networks. This certificate program is also intended for individuals with previous college-level experience who wish to upgrade their computer skills in networking technologies. 26 credit hours of work are required for graduation. **Prerequisites:** CT6620 Computer Applications, and CT5501 Personal Computer Maintenance & Repair or equivalent.

| FIRST SEMESTER | CREDITS |
|--|---------|
| CT6641 Introduction to Operating Systems | 4 |
| CT6645 Introduction to Computer Networks | 3 |
| Math Elective* | 3/4 |
| Category Elective*** | 3/4 |
| | 13/15 |

| SECOND SEMESTER | CREDITS |
|------------------------------------|---------|
| CN6647 Network Operating Systems I | 4 |
| CT6646 Computer Networks II | 3 |
| EN4401 English Composition I** | 3 |
| Category Elective*** | 3/4 |
| | 13/14 |

* Math chart starting at the level of MA5615 College Algebra or MA5621 College Algebra & Trigonometry

** Appropriate higher level writing course may be substituted.

*** Category Electives: (Choose from the following list:)

- CN----- Network Operating Systems II
- CN----- Advanced PC Maintenance & Repair
- CT6610 Introduction to Programming & Problem Solving
- CT6620 Programming I
- CT6654 The Internet & Web Page Development (HTML)
- CT6656 Internet Languages & Web Authoring Techniques I
- CT6665 Visual Basic Programming
- CO4401 Cooperative Education I

COMPUTER SERVICE SPECIALIST CERTIFICATE

This one-year certificate program is designed to provide students with the skills necessary to install, configure and repair hardware and software used with personal computers. This certificate program is also intended for individuals with previous college-level experience who wish to upgrade their skills in the computer service and support field. 28 credit hours of work are required for graduation. **Prerequisites:** CT3310 Computers for Beginners or equivalent skills, and MA0030 Basic Algebra I or equivalent.

| FIRST SEMESTER | CREDITS |
|---|---------|
| CT5501 Personal Computer Maintenance & Repair | 3 |
| CT6630 Computer Applications | 3 |
| CT6601 Fundamentals of Digital Logic | 3 |
| CT6603 Digital Logic Laboratory | 1 |
| Math Elective* | 3/4 |
| | 13/14 |

| SECOND SEMESTER | CREDITS |
|---|---------|
| CN5502 Advanced PC Maintenance & Repair | 3 |
| CT6632 Data Management Applications | 3 |
| EN4401 English Composition I | 3 |
| Category Elective** | 3/4 |
| Category Elective** | 3/4 |
| | 15/17 |

* MA5688 Math for Electronics preferred or appropriate higher level algebra course may be substituted.

** Category Electives: (Choose from the following list:)

- CT6610 Introduction to Programming & Problem Solving
- CT6641 Introduction to Operating Systems
- CT6645 Introduction to Computer Networks
- CT6654 The Internet & Web Page Development (HTML)
- CT6665 Visual Basic Programming
- CO4401 Cooperative Education I

DEAF STUDIES:

Sign Language Interpreter Certificate

The certificate program in Sign Language Interpreter is designed to provide students with an opportunity to develop an understanding of the profession of interpreting for deaf and hearing individuals and the knowledge, attitude and skills necessary to function as entry-level professional interpreters. The program also provides for career exploration within the deaf community. Credits earned in the certificate program may be applied toward associate degree requirements in Sign Language Interpreter Option. 44 credit hours of work are required for the certificate. **Program Prerequisites:**

The certificate is available only to people who have 32 or more earned college/university liberal arts/general education credit hours including English Composition I; completing AL1001 Introductory ASL I and AL1002 Introductory ASL II with a 'B' or better possess comparable skills/knowledge. See a representative in the Office of Admission for additional admissions criteria for this program.

| FIRST SEMESTER | CREDITS | |
|---|---------|--|
| AL1003 American Sign Language I | 4 | |
| IN1010 Introduction to the Deaf Community | 3 | |
| | 7 | |

| SECOND SEMESTER | CREDITS | |
|---|---------|--|
| AL2003 American Sign Language II | 4 | |
| IN1030 Introduction to the Interpreting Field | 3 | |
| IN1041 Introduction to Practicum | 2 | |
| | 9 | |

| THIRD SEMESTER | CREDITS | |
|---------------------------------------|---------|--|
| AL3003 American Sign Language III | 4 | |
| IN2029 Interpreting | 4 | |
| IN2039 Practicum I | 3 | |
| AL3010 Deaf Literature & ASL Folklore | 3 | |
| | 14 | |

| FOURTH SEMESTER | CREDITS | |
|--|---------|--|
| AL4003 American Sign Language IV & Structure | 4 | |
| IN2033 Advanced Interpreting | 4 | |
| IN2041 Practicum II | 3 | |
| S03361 Introduction to Deaf Culture | 3 | |
| | 14 | |

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

DENTAL ASSISTANT CERTIFICATE

The Dental Assistant certificate provides the student with knowledge and practical skills required to perform dental assisting functions competently. 300 hours of practical experience is provided in local dental offices to perfect the student's competence in performing dental assisting functions. The program is accredited by the Commission on Dental Accreditation of the American Dental Association. Students who successfully pass the Certification for Dental Assistants examination sponsored by the Dental Assisting National Board, Inc. become Certified Dental Assistants. 36 credit hours are required for the certificate. A personal interview is required prior to admission. See a representative in the Office of Admission for additional admissions criteria for this program.

| FIRST SEMESTER | CREDITS |
|-----------------------------------|---------|
| DA0101 Dental Assisting I | 9 |
| DA0115 Dental Radiology I | 3 |
| DA0135 Dental Science | 3 |
| EN4401 English Composition I | 3 |
| PS1101 Introduction to Psychology | 3 |
| | 21 |

| SECOND SEMESTER | CREDITS |
|---|---------|
| DA0202 Dental Assisting II | 4 |
| DA0250 Dental Radiology II | 1 |
| DA0275 Dental Seminar | 1 |
| DA0280 Dental Assisting Practicum | 5 |
| BI5510 Human Biology | 3 |
| CT3301 Computer Literacy for Health Professionals | 1 |
| | 15 |

Student Liability Insurance: All Dental Assistant students are required to carry student liability insurance. The premium is to be paid prior to the beginning of classes.

Health: Dental Assistant students are required to complete a health evaluation prior to final acceptance to the program.

C.P.R. Certification: All Dental Assistant students are required to be C.P.R. certified (Health Care Provider) prior to their first clinical assignment in the Spring semester. This may be accomplished by participating in C.P.R. instruction by the American Heart Association or the American Red Cross.

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

DIALYSIS PATIENT CARE TECHNICIAN CERTIFICATE

The Dialysis Patient Care Technician certificate program prepares persons to work as Dialysis Technicians in a variety of settings including hospital based settings and clinics. Students will receive theoretical as well as practical preparation in the duties and responsibilities of a Dialysis Patient Care Technician. The various aspects of kidney diseases, the principles of dialysis, dialysis modalities, dialysis devices, dialyzer reprocessing and water treatment are included. A 240 hour practicum in a dialysis facility is included in the program to provide the students an opportunity to develop and practice the skills of a Dialysis Patient Care Technician and participate as a team member under the supervision of a mentor in the clinical area. The student will be able to comply with the technical standards developed for the program. The program will qualify the graduate for an entry level position as a Dialysis Patient Care Technician; the graduate will also be prepared to sit for the national certification examination for dialysis technicians. 29 credit hours are required for the certificate. See a representative in the Office of Admission for additional admissions criteria for this program.

| FIRST SEMESTER | | CREDITS |
|-----------------|--|---------|
| BI5510 | Human Biology | 3 |
| EN4401 | English Composition I | 3 |
| SO3354 | Death & Dying | 3 |
| DT1010 | Overview of Dialysis | 2 |
| DT1011 | Fundamentals & Principles of Dialysis | 4 |
| | | 15 |
| SECOND SEMESTER | | CREDITS |
| DT1020 | Hemodialysis Procedures | 10 |
| DT1021 | Dialysis Patient Care Technician Practicum | 4 |
| | | 14 |

Student Liability Insurance: All Dialysis Patient Care Technician program students are required to carry student liability insurance. The premium is to be paid prior to the beginning of classes.

Health: Dialysis Patient Care Technician program students are required to complete a health evaluation prior to final acceptance to the program.

C.P.R. Certification: All Dialysis Patient Care Technician program students are required to be C.P.R. certified (Basic Life Support Level C or Health Care Provider) prior to their first clinical assignment in the Spring semester. This may be accomplished by participating in C.P.R. instruction by the American Heart Association or the American Red Cross.

Uniforms: Students will be expected to purchase and wear uniforms in the clinical areas.

Practicum Sites: The Program Director will assign each qualified applicant to a clinical affiliate. Under the direction of a mentor, each applicant shall be given a tour of the facility and have the opportunity to complete a supervised observation of dialysis procedures. The tour and observation experience will be considered by the college when making admission decision.

Travel: Students are responsible for their own transportation to and from practicum agencies. Practicum experience may include both day and evening hours and students must be prepared for these alternately scheduled hours. Students may request experience in a specific agency; however, final decision regarding the placement rests with the Program Director.

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

ELECTRONIC EQUIPMENT TECHNOLOGY CERTIFICATE

The one year certificate program in Electronic Equipment Technology is designed to prepare students for employment, often as entry level Electronic Equipment Servicing Technicians, with immediate marketable skills in electronic theory and with hands on laboratory experiences. 28 credit hours are required for the certificate. **Program Prerequisite:** High school diploma or equivalent and one year of high school algebra or equivalent.

| FIRST SEMESTER | CREDITS | |
|--|----------------|--|
| MA5621 College Algebra & Trigonometry* | 4 | |
| ET6611 Circuit Analysis I | 4 | |
| CT6601 Fundamentals of Digital Logic | 3 | |
| CT6603 Digital Logic Lab | 1 | |
| CT5501 PC Maintenance & Repair | 3 | |
| | 15 | |
| SECOND SEMESTER | CREDITS | |
| ET6612 Circuit Analysis II | 4 | |
| ET6672 Electronics I | 5 | |
| ET6690 Microcomputers | 4 | |
| | 13 | |

* MA5621 College Algebra & Trigonometry may be postponed to the second semester if MA5688 Math for Electronics is required.

** Cooperative Education is a desirable addition to the program and highly recommended.

GRAPHIC DESIGN/DESKTOP PUBLISHING CERTIFICATE

The program is designed to include computer graphics applications plus additional graphic design and business courses. It is possible to complete this program in two semesters and one summer session. There are nine required courses (27 credits) for the certificate. Optional recommended courses are available.

| FIRST SEMESTER | CREDITS |
|------------------------------|----------------|
| EN4401 English Composition I | 3 |
| FA7030 Drawing I | 3 |
| FA7096 Graphic Design I | 3 |
| FA7121 Macintosh Design | 3 |
| | 12 |

| SECOND SEMESTER | CREDITS |
|-------------------------------------|----------------|
| FA7097 Graphic Design II | 3 |
| FA7122 Publication Design | 3 |
| FA9005 Computer Illustration | 3 |
| MG6686 Small Business Management OR | |
| MK6679 Advertising | 3 |
| | 12 |

| SUMMER SESSION | CREDITS |
|------------------------------------|----------------|
| FA7126 Advanced Publication Design | 3 |

Recommended Additional Courses:

FA7130 Animation

CO4401 Cooperative Education I

FA7130 Color & Design

LEGAL ADMINISTRATIVE CERTIFICATE

The certificate program in Legal Administrative will assist students in developing essential skills and specialized knowledge needed to operate in a legal environment. Students will learn law office procedures, computer technology, and records management. In addition, students will study general legal concepts and terminology. Some of the courses within this certificate program can be applied toward the Business Management, Administrative Management, and Paralegal Associate Degree Programs. 27 credit hours are required for the certificate.

| FIRST SEMESTER | | CREDITS |
|-----------------|---|---------|
| GV3300 | Introduction to Law | 3 |
| TW6651 | Word Processing for the Administrator** | 3 |
| CT6630 | Computer Applications | 3 |
| SL6682 | Business Communication | 3 |
| SL6654 | Legal Adminstrator Support I* | 3 |
| | | 15 |
| SECOND SEMESTER | | CREDITS |
| SL6655 | Legal Adminstrator Support II*** | 3 |
| BU4430 | Business Software Integration† | 3 |
| LW6651 | Business Law I | 3 |
| CO4401 | Cooperative Education | 3 |
| | | 12 |

*Prerequisite: Passed the Keyboarding Assessment for entry into TW6651 Word Processing for the Administrator or completion of TW6650 Document Processing with a grade of C or better.

Corequisite: CT6630 Computer Applications or equivalent. GV3300 Introduction to Law.

**Prerequisites: TW6650 or equivalent with a grade of C or better, or equivalent keyboarding and formatting skills. NOTE An entrance test is given prior to acceptance into this course for those who do not take the prerequisite course.

*** Prerequisite: SL6654 Legal Administrator Support I

†Prerequisite: CT6630 Computer Applications

MEDICAL ASSISTANT CERTIFICATE

The certificate program in Medical Assistant prepares persons to work in a variety of settings. The medical assistant is a professional, multi-skilled person dedicated to assisting in all aspects of medical practice under the supervision of a physician. The medical assistant assists with patient care management, executes administrative and clinical procedures, and often performs managerial and supervisory functions. Competency in the field also requires that a medical assistant be able to communicate effectively, adhere to ethical and legal standards of medical practice, recognize and respond to emergencies, and demonstrate professional characteristics. The Medical Assistant program requires that all students be C.P.R. certified (Basic Life Support, Form "C") prior to beginning the practicum in the spring semester. This may be accomplished by: participating in C.P.R. instruction offered by the American Heart Association, the American Red Cross or local hospitals. 29 credit hours are required for the certificate. Prior to graduation, students must participate in, pass and produce a certifying card from a standard first aid course sanctioned by the American Red Cross. Students must earn a C or better in all MS prefix courses to graduate. The Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Committee on Accreditation for Medical Assistant Education. See a representative in the Office of Admission for additional admissions criteria for this program.

| FIRST SEMESTER | | CREDITS |
|-----------------|--|---------|
| PS1101 | Introduction to Psychology | 3 |
| SC5503 | Integrated Science I | 3 |
| MS1015 | Fundamentals of Medical Assisting: Administrative | 5 |
| MS1002 | Fundamentals of Medical Assisting I: Clinical | 2 |
| HS1010 | Medical Terminology I | 1 |
| MS1005 | Medical Transcription for Medical Assistants* | 2 |
| | | 16 |
| SECOND SEMESTER | | CREDITS |
| SC5504 | Integrated Science II | 3 |
| MS2015 | Seminar for Medical Assistants | 1 |
| MS2002 | Fundamentals of Medical Assisting II: Clinical | 2 |
| MS2010 | Basic Laboratory Procedures for Medical Assisting | 2 |
| MS2012 | Medical Assisting Practicum | 4 |
| HS1011 | Medical Terminology II | 1 |
| | | 13 |

*Keyboarding competency is a prerequisite for this course. See course description.

Student Liability Insurance: All medical assistant students are required to carry student liability insurance. The premium is to be paid in the fall of each year.

Health: Medical Assistant students are required to complete a health evaluation prior to acceptance into the program.

A personal interview with the program coordinator is required prior to acceptance into the program.

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

MEDICAL BILLING CERTIFICATE

The certificate program in Medical Billing is designed for persons interested in working in a medical billing setting of a clinic, medical insurance office, or billing department of other health facilities. Through the course of study, students will learn the terminology, record and forms management, medical insurance requirements, and billing procedures needed to effectively manage patient accounts. Students may also transfer some courses in this certificate program toward the Health Information Technology associate degree program. 27 credit hours are required for the certificate.

| FIRST SEMESTER | | CREDITS |
|------------------------|--|----------------|
| AC6600 | Basic Business & Bookkeeping | 3 |
| SL6675 | Advanced Word Processing* | 3 |
| MR6605 | Introduction to Medical Language I | 3 |
| SC5503 | Integrated Science I | 3 |
| | | 12 |
| SECOND SEMESTER | | CREDITS |
| Part A | | |
| MR6606 | Introduction to Medical Language II | 3 |
| SC5504 | Integrated Science II | 3 |
| MR7701 | Coding & Classification for Medical Billing** | 3 |
| MR7702 | Medical Billing Administration*** | 3 |
| | | 15 |

* Prerequisite: Skill in the Operation of a Typewriter and Formatting

** Corequisite: SC5504 Integrated Science II

*** Corequisite: MR7701 Coding and Classification For Medical Billing and SC5504 Integrated Science II

† Prerequisites: MR7701 Coding & Classification for Medical Billing and MR7702 Medical Billing Administration. Medical Billing Internship must follow the completion of all the prerequisite courses listed above.

Note: Student is responsible for their own transportation. Malpractice insurance is necessary.

MEDICAL TERMINOLOGY & TRANSCRIBING CERTIFICATE

The certificate program in Medical Terminology & Transcribing is designed for persons interested in working in a hospital medical record department, physician's office, clinic, laboratory, neighborhood health center, medical insurance office or other allied health institution. The program is of special interest to persons with some previous office training who wish to enhance job opportunities. It is an excellent choice for someone wishing to specialize in order to work in a medical or paramedical setting. All courses within this certificate program can be transferred to the Administrative Management: Medical Administration Option associate degree program. 27 credit hours are required for the certificate.

| FIRST SEMESTER | | CREDITS |
|------------------------|--|----------------|
| TW6651 | Word Processing for the Administrator* | 3 |
| MR6605 | Introduction to Medical Language I | 3 |
| MR6661 | Medical Transcription I | 3 |
| CT6630 | Computer Applications | 3 |
| | | 12 |
| SECOND SEMESTER | | CREDITS |
| Liberal Arts Elective | | 3 |
| MR6606 | Introduction to Medical Language II | 3 |
| MR6662 | Medical Transcription II | 3 |
| SL6675 | Advanced Word Processing | 3 |
| CO4401 | Cooperative Education I | 3 |
| | | 15 |

* Prerequisite: TW6650 Document Processing or equivalent.

NOTE: An entrance test is given to those who do not take the prerequisite course, prior to acceptance into TW6651 Word Processing for the Administrator. Students with good keyboarding and formatting skills should take TW6651 Word Processing for the Administrator. Students who need to develop keyboarding and formatting skills should take TW6650 Document Processing.

NURSING CERTIFICATE: PRACTICAL

The ten-month certificate program in Practical Nursing is designed to provide the student with the theory and skills needed to function as a competent entry-level graduate practical nurse. The Practical Nurse Program is accredited by the National League for Nursing and has Board of Registration in Nursing approval. Graduates are prepared to write the State Board Examination for licensure as a Licensed Practical Nurse. (The Application for Registration as a Practical Nurse With Examination includes the following question – "Court Record: 'Have you ever been convicted by Court of Law? Yes ____ No _____. If 'yes,' please enclose explanation stating date, charge, disposition'.") Criminal Offender Record Information (CORI) checks are required prior to participation in the clinical component of Nursing Courses. See full statement on program listing page.

Program Prerequisite: High school diploma or equivalent. **Admission Condition:** PS1101 Introduction to Psychology (3 credits) is a requirement. It must be completed prior to the Fall semester. It is a prerequisite for PS1210 Developmental Psychology I and PS1211 Developmental Psychology II. 44 credit hours are required for the certificate. The Practical Nursing course sequence is 40 weeks in length, exclusive of vacations, and is divided into three semesters. See a representative in the Office of Admission for additional admissions criteria for this program.

| FALL SEMESTER | | CREDITS |
|-----------------|--------------------------------------|---------|
| PN0101 | Practical Nursing I | 10 |
| SC5503 | Integrated Science I | 3 |
| PS1210 | Developmental Psychology I | 3 |
| | | 16 |
| SPRING SEMESTER | | CREDITS |
| PN0201 | Practical Nursing II | 10 |
| SC5504 | Integrated Science II | 3 |
| PS1211 | Developmental Psychology II | 3 |
| | | 16 |
| SUMMER SEMESTER | | CREDITS |
| PN0301 | Practical Nursing III | 8 |
| PN0310 | Issues & Trends in Practical Nursing | 1 |
| | | 9 |

THE CURRICULUM

Sequence of Courses: The Practical Nursing curriculum has been structured in a special sequence. Students are required to follow this sequence of courses throughout the entire three semesters of the Practical Nursing program. Students are also required to complete successfully all courses prior to or during each semester before proceeding to the next semester. All prerequisite courses must be completed in the appropriate sequence. Any deviation from the planned schedule can be made only with written permission from the Practical Nursing Program Coordinator. It is the responsibility of the student to be knowledgeable regarding when courses are offered and plan accordingly.

Grading: The final grade in Practical Nursing courses is based on theory and on performance in the clinical setting. A failure in either area constitutes failure for the course. Students must maintain a "C" in Practical Nursing courses to proceed to the next semester. Graduation from the Practical Nursing Program is contingent on maintaining at least a grade of "C" in all Practical Nursing courses and a Quality Point Average (QPA) of 2.0.

Exams: Standardized National Nursing Examinations are required as an integral aspect of the curriculum for graduation.

Travel: Students are responsible for their own transportation to and from clinical agencies. Selected clinical experiences may be offered during the evening hours. Students must be prepared for these alternately scheduled hours. Students may request experience in a specific clinical agency; however, final decision regarding the placement of students rests with the Practical Nursing faculty.

NOTE: On occasion, conferences may be scheduled at the school during clinical hours, requiring students to return to the school from the clinical agency.

Student Liability Insurance: All Practical Nursing students are required to carry student liability insurance. The premium is to be paid at registration in the Fall of each year.

Health: Nursing students are required to complete a health evaluation prior to final acceptance to the Practical Nursing program. Students desiring a career in Practical Nursing must be physically and emotionally capable of assuming responsibility for client care in the health care institution they are assigned to for clinical practice.

C.P.R. Certification: The Practical Nursing program requires that all students be C.P.R. Certified (Level of Health Care Provider) prior to clinical experience in a health care institution. Students must make every effort to become certified prior to admission to the Practical Nursing program, but certification must be obtained prior to the start of clinical practice. This may be accomplished by participating in C.P.R. instruction offered by the American Heart Association, the American Red Cross or local hospitals. It is also expected that students maintain certification throughout the educational program in Practical Nursing.

OFFICE AUTOMATION CERTIFICATE

The Office Automation Certificate prepares the student for immediate employment and promotion in today's business environment. The student is also encouraged to explore areas of personal interest through elective course offerings. Career opportunities exist in almost all fields for those who have the skills offered by this program. 24 credit hours are required for the certificate.

FIRST SEMESTER

| | CREDITS |
|---|---------|
| TW6651 Word Processing for the Administrator† | 3 |
| CT6630 Computer Applications | 3 |
| Business Elective | 3 |
| Elective* | 3 |
| | 12 |

SECOND SEMESTER

| | CREDITS |
|---|---------|
| SL6675 Advanced Word Processing†† | 3 |
| BU4430 Business Software Integration††† | 3 |
| Business Elective | 3 |
| Elective* | 3 |
| | 12 |

† Prerequisite: TW6650 Document Processing or equivalent. NOTE: An entrance test is given to those who do not take the prerequisite course, prior to acceptance into TW6651 Word Processing for the Administrator. Students with good keyboarding and formatting skills should take TW6651 Word Processing for the Administrator. Students who need to develop keyboarding and formatting skills should take TW6650 Document Processing.

†† Prerequisites: Keyboarding and document processing skills (TW6651 Word Processing for the Administrator or equivalent).

††† Prerequisite: TW6650 Document Processing or equivalent, and CT6630 Computer Applications.

* Recommended electives: The following is a representative partial list of courses that can be applied toward this certificate. Students are urged to seek assistance from an advisor in selecting those courses which best meet their development needs and goals: AC6683 Computerized Accounting (Prerequisites: AC6610 Introductory Accounting I and AC6611 Introductory Accounting II), CT5501 Personal Computer Maintenance & Repair, CT6632 Personal Computer Applications (Prerequisite: CT6630 Computer Applications or equivalent), CT7000 Introduction to Macintosh, FA7121 Macintosh Design, FA7122 Publication Design, MG6690 Introduction to Management Information.

NOTE: If you are planning to continue your studies for an associate degree from Northern Essex Community College upon completion of this certificate program, see an advisor to assist with selecting your elective courses.

OFFICE SKILLS CERTIFICATE

The certificate program in Office Skills is designed as a short, intensive career program to give students opportunity to acquire office skills necessary for today's business environment. The program includes required courses supplemented by a variety of electives designed to satisfy individual needs. Courses in the program may be transferred toward associate degree programs in Administrative Management. 24/25 credit hours are required for the certificate.

FIRST SEMESTER

| | CREDITS |
|---|---------|
| EN4401 English Composition I | 3 |
| TW6651 Word Processing for the Administrator† | |
| CT6630 Computer Applications | 3 |
| AC6610 Introductory Accounting I | 3 |
| | 12 |

SECOND SEMESTER

| | CREDITS |
|-----------------------------------|---------|
| SL6675 Advanced Word Processing†† | 3 |
| Office Technology Elective* | 6 |
| Liberal Arts Elective** | 3/4 |
| | 12/13 |

† Prerequisite: TW6650 Document Processing or equivalent. Note: An entrance test is given to those who do not take the prerequisite course, prior to acceptance into TW6651 Word Processing for the Administrator. Students with good keyboarding and formatting skills should take TW6651 Word Processing for the Administrator. Students who need to develop keyboarding and formatting skills should take TW6650 Document Processing.

†† Prerequisites: Keyboarding and document processing skills (TW6651 Word Processing for the Administrator or equivalent).

* Choose two of the following office skills electives: SL6663 Integrated Office Procedures, CO4401 Cooperative Education I, BU4430 Business Software Integration, SH6601 Notetaking, SL6682 Business Communications, AC6611 Introductory Accounting II, BU4400 Introduction to Business.

** Must be selected among Humanities, Social Science, Natural Science.

PARALEGAL STUDIES† CERTIFICATE

The certificate program in Paralegal Studies combines a liberal arts foundation with a career concentration in the paralegal area. It is designed for students who have already earned at least 36 liberal arts college credits in a minimum of four disciplines. A total of 63 college credits must be earned, 27 of which must be taken at Northern Essex for completion of certificate.

| REQUIRED COURSES | CREDITS |
|-------------------------------------|---------|
| LW6601 Introduction to Paralegalism | 3 |
| GV3300 Introduction to Law | 3 |
| LW6671 Legal Research & Writing I | 3 |
| LW6672 Legal Research & Writing II | 3 |
| LW6661 Litigation | 3 |
| TOTAL CREDITS 15 | |

| ELECTIVE COURSES | CREDITS |
|---------------------|---------|
| Paralegal Elective* | 3 |
| TOTAL CREDITS 12 | |

NOTES APPLICABLE TO PARALEGAL STUDIES

CERTIFICATE PROGRAM:

† While paralegals assist attorneys with a wide range of tasks, Paralegals must not set fees, give legal opinions or advice, or represent a client before a court or agency.

*PARALEGAL ELECTIVES:

- LW6653 Real Estate Law
- LW6662 Wills, Estates and Trusts
- LW6663 Corporate Law
- LW6664 Family Law
- LW6666 Tort Law
- LW6667 Computer Applications in Law

and any other special topics elective courses designed for Paralegal Program students that may be proposed in the future.

LW COURSES: All law-specialty courses (LW Prefix) are taught by experienced attorneys. This program is approved by the AMERICAN BAR ASSOCIATION. Students must obtain a minimum grade of C in all law specialty courses (LW prefix) to meet Paralegal Program graduation requirements. Credit for law specialty courses taken more than 6 years prior to completion of the Paralegal Studies program will not be awarded, unless the student's proficiency in the area can be demonstrated. Students interested in transferring credits taken at Northern Essex to a B.A. in Paralegal Studies, should consult with the receiving institution. Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or a cooperative education experience or a program that includes a clinical or practicum affiliation with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

RESPIRATORY CARE CERTIFICATE

The sixteen month certificate program in Respiratory Care makes up the first three semesters of the Associate degree program. The Respiratory Care certificate program prepares the student for an entry-level practitioner position by teaching the student fundamental knowledge, technical information and clinical skills necessary for employment in the respiratory care field. Certificate graduates will assume clinical responsibility for a variety of respiratory care procedures under the supervision of advanced level respiratory care practitioners and/or physicians. Graduates are prepared to sit for the examination given by the National Board for Respiratory Care to become a Certified Respiratory Therapist. This program is fully accredited by the Committee on Accreditation for Respiratory Care and the Commission on Accreditation of Allied Health Education Programs. In order to progress in the program, a grade of C or better is required in each Respiratory Care course. 48 credit hours are required for the certificate. See a representative in the Office of Admission for additional admissions criteria for this program.

| FIRST SEMESTER | CREDITS |
|---|---------|
| BI5519 Anatomy & Physiology I | 4 |
| RS6614 Introduction to Respiratory Care | 7 |
| RS6615 Respiratory Practicum I | 2 |
| EN4401 English Composition I | 3 |
| | 16 |
| SECOND SEMESTER | CREDITS |
| BI5520 Anatomy & Physiology II | 4 |
| RS6629 Respiratory Pharmacology | 2 |
| RS6624 Respiratory Procedures & Assessment | 7 |
| RS6625 Respiratory Practicum II | 4 |
| | 17 |
| THIRD SEMESTER | CREDITS |
| RS6644 Ventilator Management & Pulmonary Function Testing | 7 |
| RS6645 Respiratory Practicum III | 4 |
| BI5553 Microbiology | 4 |
| | 15 |

After successful completion of three semesters and 48 credits, the student earns a Certificate and becomes eligible to take the national entry level CRT exam. Passing this exam is necessary to obtain a license to practice Respiratory Care.

Student Professional Liability Insurance: All Respiratory Care students are required to carry student professional liability insurance. The premium is to be paid prior to the beginning of classes. Students may not participate in the Respiratory Care program without this insurance coverage.

Health: Respiratory Care students are required to complete a health evaluation prior to final acceptance to the Respiratory program. The college's Student Health Service will designate when the information is due at the college.

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or includes a clinical or practicum affiliation or a cooperative education experience with a private or public health care provider, will be required to undergo a Criminal Offender Record Information (CORI) and/or Sex Offender Record Information (SORI) check.

SEMICONDUCTOR MANUFACTURING CERTIFICATE PROGRAM

The one-year certificate program in Semiconductor Manufacturing is designed to prepare students for entry level employment in industries that manufacture the semiconductor chips that support the electronics revolution. Students learn immediate marketable skills and receive hands on laboratory experiences in electronics and vacuum technology. 28 credit hours of work required for the certificate. **Program Prerequisite:** MA5621 College Algebra & Trigonometry.

FALL SEMESTER

| | CREDITS |
|---|-----------|
| EN4401 English Composition I | 3 |
| ET6611 Circuit Analysis I | 4 |
| ET6691 Semiconductor Manufacturing Overview | 1 |
| PI5621 Applied Physics I | 4 |
| | 12 |

SPRING SEMESTER

| | CREDITS |
|----------------------------|-----------|
| ET6612 Circuit Analysis II | 4 |
| ET6672 Electronics I | 5 |
| PI5622 Applied Physics II | 4 |
| | 13 |

SUMMER SEMESTER

| | CREDITS |
|---|----------|
| ET6692 Vacuum Technology | 2 |
| ET6693 Internship in Semiconductor Manufacturing | 1 |
| | 3 |

Students enrolling in any math course must first take the college assessment test. Placement is according to assessment test results. Students placed at MA0040 Basic Algebra II level should take MA5687 Math for Electronics, if available.

TOTAL QUALITY MANAGEMENT CERTIFICATE

The certificate in Total Quality Management (courses currently offered only in the evening) is designed as an intensive career program for students desiring specific training in Total Quality Management philosophies, strategies and tools. The program provides the skills necessary for managing or participating in a company wide program for workforce utilization, management of process/product/service quality, customer service, productivity and continuous improvement in a manufacturing or service environment. 18 credit hours are required for the certificate and may be transferred to the associate degree option in Business Management: Total Quality Management.

FIRST SEMESTER

| | CREDITS |
|---|---------|
| MG6620 Introduction to Total Quality Management | 3 |
| MG6625 Planning for Total Quality Management | 3 |
| MG6633 Process Control & Improvement | 3 |

SECOND SEMESTER

| | CREDITS |
|--|---------|
| MG6630 Management of Total Quality Systems | 3 |
| MG6635 Management of Product Design | 3 |
| Elective* | 3 |

* Elective (choose from the following):

MG6666 Principles of Management,

MG7701 Principles of Materials Management

MG7730 Just-In-Time Manufacturing

CT6630 Computer Applications

MG7720 Production & Capacity Management

MG7706 Materials Requirements Planning

and other related state of the art special topics courses as offered and approved for this program.

TRAVEL & TOURISM MANAGEMENT CERTIFICATE

The certificate program in Travel and Tourism Management provides the student with the knowledge and practical skills required to gain employment in the travel industry. 27 credit hours are required for the certificate.

| FIRST SEMESTER | | CREDITS |
|-----------------|---|---------|
| TL1001 | Introduction to the Travel & Tourism Industry | 3 |
| GE9511 | Introduction to Geography | 3 |
| TL1010 | Reservation/Ticketing I | 3 |
| BU4400 | Introduction to Business | 3 |
| AC6600 | Basic Business and Bookkeeping* | 3 |
| | | 15 |
| SECOND SEMESTER | | CREDITS |
| SL6682 | Business Communication | 3 |
| TL1020 | Reservation/Ticketing II | 3 |
| | Elective** | 3 |
| C04401 | Cooperative Education I | 3 |
| | | 12 |

* Students who are planning to complete the Travel and Tourism associate degree will be required to take AC6610 Introductory Accounting I.

** Recommended electives:

SH6601 Notetaking

TW6651 Document Processing

TL1015 International and Domestic Destinations

SL6665 Essentials of Office Management

CT6630 Computer Applications

MK6672 Marketing for Hospitality & Tourism

Foreign Language.

NOTE: TW6650 Document Processing or equivalent is a preprogram requirement. Students must demonstrate competencies by taking a mandatory Keyboarding Assessment Test. Students who do not pass this test must elect TW6650 before or during the first semester of study.

WEB PAGE DESIGN & DEVELOPMENT CERTIFICATE

This one-year certificate program is designed to provide students with the skills necessary to design, create, and maintain web pages, and to maintain the web site. This certificate program is also intended for individuals with previous college-level experience who wish to upgrade their computer skills in internet technologies. 26 credit hours are required for the certificate. **Prerequisites:** TW6650 Computer Keyboarding I or equivalent skills, CT6630 Computer Applications or FA7121 Macintosh Design or equivalent skills, and MA5615 College Algebra, or equivalent.

| FIRST SEMESTER | | CREDITS |
|----------------|--|------------------|
| CT6654 | The Internet & Web Page Development (HTML) | 3 |
| CT6620 | Programming I | 4 |
| EN4401 | English Composition I* | 3 |
| | Fine Arts Elective** | 3 |
| | | TOTAL CREDITS 13 |

SECOND SEMESTER

| | | |
|--------|---|---------------------|
| CT6656 | Internet Languages & Web Authoring Techniques I | 4 |
| | Fine Arts Elective** | 3 |
| | Category Elective*** | 3/4 |
| | Category Elective*** | 3/4 |
| | | TOTAL CREDITS 13/15 |

*Appropriate higher level writing course may be substituted.

Fine Arts Electives: (Choose from the following list)

FA7122 Publication Design

FA7130 Animation

Any (FA) Special Topics Courses that are appropriate.

(A list will be provided each semester.)

***Category Electives:

| | |
|--------|---|
| C04401 | Cooperative Education I |
| CT6623 | Current Topics in Computer Science (Should be chosen to reflect the Web) |
| CT6640 | Programming II |
| CT6645 | Introduction to Computer Networks |
| CT6657 | Internet Languages & Web Authoring Techniques II |
| CT6665 | Visual Basic Programming |
| CT6681 | Advanced Database Management Software |
| CT6688 | C++ Programming Language |
| MK6679 | Advertising |
| | Additional Fine Arts Elective |

NOTE: Electives may not include any developmental courses such as Basic Math, Basic Algebra I & Basic Algebra II, Basic Reading or Basic Writing.

Course Descriptions

COURSE SCHEDULING

The Northern Essex Community College Catalog generally makes no attempt to indicate when or for whom specific courses are scheduled. Not every course listed is offered every year or semester.

SPECIAL TOPICS/DIRECTED STUDIES COURSES

In addition to the courses listed, courses of special nature may be made available for students. For further information concerning such courses, see the Academic Standards section of the catalog.

MATH COURSES

Math requirements vary for different academic programs. Please see an academic advisor for math course sequencing in an academic program. **NOTE:** Credit for Basic Math, Basic Algebra I, Business Math and/or Basic Algebra II is not applicable for the degrees of Liberal Arts, General Studies, Business Transfer or Engineering Science and may not be transferable to four year colleges and/or universities. Credit is not given for both MA5615 and MA5621 or for both MA5620 and MA5621. Liberal Arts Math I and II will not satisfy the math requirement in business management programs. For all mathematics courses involving prerequisites, the student must earn a C or better in the prerequisite course before attempting the next course in sequence.

SYMBOLS

All courses are identified by a six-symbol description preceding the course title. The first two digits relate to the discipline and are letter symbols; the last four digits are numbers. The following list of symbols is provided as a guide to help each student locate a specific course description:

| | |
|--|---------|
| Accounting—AC | 108 |
| Administrative Management | |
| SH, SK, SL, TW | 108-109 |
| American Sign Language—AL | 109 |
| Banking—BK | 110 |
| Biology—BI | 111 |
| Business—BU | 112 |
| Cancer Registry —MR | 112-113 |
| Chemistry—CH | 113 |
| Civil Technology—CE | 113 |
| Computer Hardware & Networking —CN | 113-114 |
| Computer & Information Sciences—CT | 114-116 |
| Cooperative Education—CO | 117 |
| Criminal Justice—CJ | 117-118 |
| Cross Disciplinary -CD | 118 |
| Dance—FA | 128 |

| | |
|---|---------|
| Dental Assistant—DA | 118 |
| Dialysis Patient Care Technician—DT | 118-119 |
| Early Childhood Education—CC, ECE | 119-121 |
| Earth Science—ES | 121 |
| Economics—EC | 121 |
| Education—ED | 121 |
| Electronics & Engineering Science—ET | 121-123 |
| English/Literature—EN | 123-127 |
| Finance—FI | 127 |
| Fine Arts—FA | 127-129 |
| French—FR | 130 |
| Geography—GE | 130 |
| German—GM | 130 |
| Government—GV | 130 |
| Health Information Technology—MR | 131-132 |
| Health Services—HS | 132 |
| History—HI | 132-134 |
| Humanities—HU | 134 |
| Human Services—MH | 134-136 |
| Italian—IT | 136 |
| Law—LW | 136-137 |
| Management—MG | 138-139 |
| Marketing—MK | 139 |
| Mathematics—MA | 139-141 |
| Medical Assistant—MS | 141-142 |
| Music—MU | 142-143 |
| Nursing—Practical, PN | 143 |
| Nursing— Registered, NS | 143-144 |
| Philosophy—PH | 144 |
| Physical/Outdoor Education & Leisure Studies—PE | 144-145 |
| Physics—PI | 146 |
| Psychology—PS | 146-147 |
| Radiologic Technology—RTA | 147-148 |
| Religion—RE | 149 |
| Respiratory Care—RS | 149-150 |
| School-Age Child Care—ECE | 150-151 |
| Science—SC | 150 |
| Sign Language Interpreter—IN | 151 |
| Sociology—SO | 151-152 |
| Spanish—SP | 152-153 |
| Theater—TH | 153-154 |
| Travel and Tourism—TL | 154 |

ACCOUNTING

AC6600 BASIC BUSINESS & BOOKKEEPING

A 1-semester course; 3 credit hours. Includes the study of business papers, bank checks, reconciliations, payroll accounts, the use of journals, general subsidiary ledger and the preparation of financial statements. As part of the course, the student will be required to complete a practice set. Also provides practical experience in applying the fundamentals of accounting. 3 class hours per week.

AC6610 INTRODUCTORY ACCOUNTING I

A 1-semester course; 3 credit hours. Basic concepts of accounting; uses of accounting data. Topics include the theory of debit and credit, use of journals and ledgers, analysis and recording of financial transactions, the accounting for both a service type business and a merchandising business, internal control, special journals and the control of cash transactions, accounts receivable, accounts payable, inventories and plant and equipment. 3 class hours per week.

AC6611 INTRODUCTORY ACCOUNTING II

A 1-semester course; 3 credit hours. Continuation of AC6610. Emphasis is on accounting for payrolls, partnerships, corporations, corporate stock, retained earnings, dividends, bonds, present value theory, marketable securities and investments, non-current assets and liabilities, and Statement of Changes in Financial Position. 3 class hours per week. **Prerequisite:** AC6610 with a grade of C or better.

AC6620 INTERMEDIATE ACCOUNTING I

A 1-semester course; 3 credit hours. Detailed study of accounting theory/practice as it relates to financial accounting. Includes income statement and balance sheet presentation, cash, temporary investments, short term receivables, inventories and current liabilities. 3 class hours per week. **Prerequisite:** AC6611.

AC6621 INTERMEDIATE ACCOUNTING II

A 1-semester course; 3 credit hours. Continuation of AC6620. Includes tangible assets, intangible assets, long term liabilities, elements of corporate capital, investments and statement of changes in financial position. 3 class hours per week. **Prerequisite:** AC6620.

AC6671 COST ACCOUNTING

A 1-semester course; 3 credit hours. Intensive study of cost methods; costing for materials, labor and factory overhead; job order process, direct costing and the use of standards and computer spreadsheets. 3 class hours per week. **Prerequisite:** AC6611.

AC6682 TAX ACCOUNTING

A 1-semester course; 3 credit hours. An introduction to the principles of federal taxation with emphasis on history of income taxation, gross income, deductions, exemptions, accounting records, computerized preparation and filing of tax returns. 3 class hours per week. **Prerequisite:** AC6611.

AC6683 COMPUTERIZED ACCOUNTING SYSTEMS (CAS)

A 1-semester course; 3 credit hours. Designed to provide both reinforcement of Introductory Accounting I and II and hands on experience with a microcomputer and its role in business situations. System design theory and accounting theory will be used to show the flow of business information through data entry and financial preparation and reproduction. 3 class hours and 1 lab hour per week. **Prerequisite:** AC6611.

ADMINISTRATIVE MANAGEMENT

SH6601 NOTETAKING

A 1-semester course; 3 credit hours. Notetaking is an entry level alphabetic system of shorthand designed to enable the student to master shorthand in a short time. This course includes principles, brief forms, abbreviations as well as developing the skill of taking dictation. Study of the non-shorthand elements of spelling and punctuation. 3 class hours per week.

SK6653 MACHINE TRANSCRIPTION

A 1-semester course; 3 credit hours. Development of high-level skills in the use of transcription equipment. Emphasis is placed on the use of business, professional, and technical materials. Development of vocational transcription rates. 4 class hours per week.

Prerequisite: TW6651 Word Processing for the Administrator.

SL6654 LEGAL ADMINISTRATOR SUPPORT I

A 1-semester course; 3 credit hours. This course includes: legal office organization, information management liabilities and requirements, computerized legal document drafting and production. The student will use application software to learn legal correspondence. Legal correspondence studies include preparation of the following: pleadings, discoveries, legal motion and memoranda, and appellate briefs. The rules of grammar are stressed throughout. 2 class hours and two lab hours per week. **Prerequisites:** Passed the Keyboarding Assessment for entry into TW6651 Word Processing for the Administrator or completion of TW6650 Document Processing with a grade of C or better. **Corequisite:** CT6630 Computer Applications or equivalent and GV3300 Introduction to Law

SL6655 LEGAL ADMINISTRATOR SUPPORT II

A 1-semester course; 3 credit hours. This course continues the study that began in Law Office Procedures I. The course of study includes: basic legal research, law office bookkeeping procedures, docketing and tickler systems, law practice specialties, a survey of practice specialty software and use of the Internet as a resource for legal materials. 3 class hours per week. **Prerequisite:** SL6654 Legal Administrator Support I

SL6663 INTEGRATED OFFICE PROCEDURES

A 1-semester course; 3 credit hours. Emphasis is placed on the rapidly changing workplace in the global economy, which requires the office professional to be proficient in the application of office technologies in effecting administration solutions. Topics of study include administration communication, human relations, decision-making, creative thinking, career planning and employment. Instruction includes the application of office procedures and office information technologies through case studies and administration simulations using word processing, and database information technologies. 3 class hours per week. **Prerequisite:** TW6651 Word Processing for the Administrator and CT6630 Computer Applications.

SL6675 ADVANCED WORD PROCESSING

A 1-semester course; 3 credit hours. Designed to develop the word processing business skills applied in today's business environments. Merging, creating multi-column documents, changing advanced fonts, sorting, creating macros and desk top publishing are among the advanced functions covered. Keyboarding speed skills assessment will be conducted throughout to build typing skills. 3 class hours per week. **Prerequisite:** TW6651 Word Processing for the Administrator or equivalent.

SL6682 BUSINESS COMMUNICATIONS

A 1-semester course; 3 credit hours. Development and refinement of communication skills necessary for satisfactory job performance in business, particularly on the managerial and administrative levels. The course emphasizes various types of business letter writing, reports, memoranda, and business forms common to the operation of the modern business office. The preparation of business documents will be coordinated with the concepts of word processing/information management. 3 class hours per week.

TW6600 KEYBOARDING FOR COMPUTERS I

A 1-semester course; 1 credit hour. Designed to teach keyboarding skills to students entering a variety of fields such as computer science, data processing, accounting or any occupation that utilizes a keyboard similar to a typewriter to input information. 1 class hour per week.

TW6650 DOCUMENT PROCESSING

A 1-semester course; 3 credit hours. Designed to develop touch control of the computer keyboard, basic formatting functions and the use of word processing terminology. Concentration on building speed and accuracy skills. This course is designed to emphasize the application of these skills to common business correspondence. 3 class hours per week.

TW6651 WORD PROCESSING FOR ADMINISTRATORS

A 1-semester course; 3 credit hours. Using a computer, the student concentrates on improving keyboarding speed, accuracy, and formatting using one of the most popular word processing tools in business today. The focus of the course is on document mastery of memos, letters, business reports, forms, and tables. Students will also learn features of word processing as they format business documents and build keyboarding skill. 3 class hours per week.

Prerequisite: A grade of C or better for TW6650 or students must pass the Keyboarding assessment test.

AMERICAN SIGN LANGUAGE

Note: All American Sign Language courses are considered to be humanities/foreign language courses. Students seeking to transfer are advised to consult the requirements of colleges to which they plan to transfer to determine whether they will be accepted either as humanities and/or foreign language courses for purposes of transfer.

AL1001 INTRO. AMERICAN SIGN LANGUAGE I

A 1-semester course; 3 credit hours. Designed to present basic grammatical rules in the use of American Sign Language (ASL). Basic ASL vocabulary, manual alphabet/numbers, visual-gestural communication and information related to Deaf Culture will also be covered. All lecture, laboratory activities and outside assignments are intended to develop basic competence in receptive and expressive use of ASL. The class will be taught primarily in ASL. Deaf and Hard of Hearing individuals have priority in securing seats in this course. 2 class hour and 2 lab hours per week.

AL1002 INTRO. AMERICAN SIGN LANGUAGE II

A 1-semester course; 3 credit hours. Designed to be a continuation of Introductory American Sign Language I. There will be exposure to complex grammatical rules in the use of American Sign Language (ASL). Additional ASL vocabulary development, finger-spelling/numbers, and information related to Deaf Culture will also be addressed. All lecture, laboratory activities, and outside assignments are intended to develop further competence in receptive and expressive use of ASL. Class will be taught primarily in ASL. Deaf and Hard of Hearing individuals have priority in securing seats in this course. 2 class hours and 2 lab hours per week. **Prerequisite:** Intro. American Sign Language I with a grade of C or better.

AL1003 AMERICAN SIGN LANGUAGE I

A 1-semester course; 4 credit hours. Intensive, direct immersion approach to learning American Sign Language (ASL). Basic grammatical rules in the use of ASL, basic ASL vocabulary, manual alphabet/numbers, and visual-gestural communication are covered. Includes information about Deaf Culture, history of ASL and how it exists in society today. All lecture, laboratory activities and outside assignments are intended to develop basic competency in receptive and expressive use of ASL. The class will be taught primarily in ASL. 3 class hours and 3 lab hours per week. **Prerequisites:** AL1002 Introductory American Sign Language II with a "B" or better or demonstrate comparable skills/knowledge; completed or demonstrated sufficient skills/knowledge to enter EN4401 English Composition I and permission of the coordinator.

AL2003 AMERICAN SIGN LANGUAGE II

A 1-semester course; 4 credit hours. Designed to be a continuation of American Sign Language I. Complex grammatical rules in the use of ASL, additional ASL vocabulary, finger spelling/numbers, and visual-gestural communication will be covered. Includes information about Deaf Culture. All lecture, laboratory activities and outside assignments are intended to further develop receptive and expressive competence in the use of ASL. 3 class hours and 3 lab hours per week. **Prerequisite:** American Sign Language I with a grade of C or better and permission of the coordinator.

AL3003 AMERICAN SIGN LANGUAGE III

A 1-semester course; 4 credit hours. Designed to be a continuation of American Sign Language II. Intended to refine and build American Sign Language (ASL) competence in and performance of most ASL grammatical features and ASL variations covered in previous courses. Receptive and expressive abilities enhanced through exposure to selected stylistic, regional, social, ethnic, socially restricted, and age-related ASL renditions. Additional ASL vocabulary will be covered through text analysis. Includes information on Deaf Culture. All lecture, laboratory activities and outside assignments focus on systematically integrating all materials covered in this and all prior courses. This class will be taught primarily in ASL. 3 class hours and 3 lab hours per week. **Prerequisite:** American Sign Language II with a grade of C or better.

AL3010 DEAF LITERATURE & ASL FOLKLORE:

A 1-semester course; 3 credit hours. Representative fiction, nonfiction, poetry, and drama depicted in readings and videotapes related to everyday lives of Deaf people. Develops insight and appreciation of Deaf literature and ASL folklore and their implications for education. 3 class hours per week. **Prerequisites:** AL1002 Introductory ASL II or comparable American Sign Language abilities.

AL4003 AMERICAN SIGN LANGUAGE IV & STRUCTURE

A 1-semester course; 4 credit hours. A continuation of American Sign Language III. Further refines and builds American Sign Language (ASL) competence in and performance of all ASL grammatical features, such as non-manual behavioral rules, as well as ASL variations addressed in preceding ASL courses. Including linguistic aspects dealing with phonology, morphology, syntax and lexicology of ASL; additionally, the concepts of language variation, dialect, creolization and bilingualism will be discussed at length. Receptive and expressive abilities are enhanced through exposure of selected stylistic, regional, social, ethnic, socially restricted, and age-related ASL renditions, as well as additional ASL vocabulary which will be addressed through text analysis. Includes information on Deaf Culture. Taught primarily in ASL. 3 class hours and 3 lab hours per week. **Prerequisites:** AL3003 American Sign Language III with a grade of C or better and permission of the coordinator.

BANKING

BK6601 PRINCIPLES OF BANKING

A 1-semester course; 3 credit hours. Survey of banking's relationship to the total economy and the functional relationships of departments within the bank. Develops the framework for more specialized study of the banking institution. 3 class hours per week.

BK6611 MONEY & BANKING

A 1-semester course; 3 credit hours. Practical aspects of money and banking; emphasis is placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments and foreign exchange showing their repercussions on the banking industry in affecting yield curves and the structuring of portfolios. 3 class hours per week.

BK6622 REAL ESTATE FINANCE

A 1-semester course; 3 credit hours. Examination of mortgage credit in the U. S. and the structure of the mortgage market. An analysis of the management considerations in mortgage lending and portfolio management. 3 class hours per week.

BK6623 CONSUMER LENDING

A 1-semester course; 3 credit hours. This course is designed to provide an overview of the consumer credit operation. It examines the role of consumer credit in overall banking operations and offers an improved understanding of the consumer credit function within a bank. 3 class hours per week.

BK6650 FINANCIAL PLANNING

A 1-semester course; 3 credit hours. Examines comprehensive financial planning, cash flow management, investments, tax liability, future family needs and estate planning. 3 class hours per week.

BK6651 ANALYZING FINANCIAL STATEMENTS

A 1-semester course; 3 credit hours. Basic consideration in financial statement analysis, basic financial ratios, analysis of working capital, and other items. 3 class hours per week.

BK6652 LAW & BANKING PRINCIPLES

A 1-semester course; 3 credit hours. This course is designed as an overview of the legal aspects of banking with special emphasis on the Uniform Commercial Code. Topics include up-to-date summaries of law pertaining to contracts, real estate, bankruptcy, and the legal implications of consumer lending. 3 class hours per week.

BK6653 MARKETING FOR BANKERS

A 1-semester course; 3 credit hours. A study of the concepts and philosophies of marketing, information research and target together with the marketing mix, product strategy, distribution strategy, advertising and sales promotion and pricing strategy. 3 class hours per week.

BK6654 LAW & BANKING APPLICATIONS

A 1-semester course; 3 credit hours. This course is an introduction to laws pertaining to secured transactions, letters of credit and the bank collection process. Topics include check losses and legal issues related to processing checks, and secured transactions legal issues such as collateral, perfection and default. 3 class hours per week.

BK6666 BRANCH BANKING SERIES

A 1-semester course; 3 credit hours. In this course, students will learn how to effectively use accepted management principles in the banking environment. The first part of the course is dedicated to retail management, the second to sales management and the third will emphasize financial performance of banks. 3 class hours per week.

BIOLOGY

BI5510 HUMAN BIOLOGY

A 1-semester course; 3 credit hours. A basic study of the structure and functioning of the human body. Emphasis will be placed on the interrelationships among the systems. This course introduces the major biological principles through the study of the human body. 3 class hours per week.

BI5511 HUMAN BIOLOGY LABORATORY

A 1-semester course; 1 credit hour. The concepts studied in the classroom will be reinforced with microscope work, models, charts and related activities/experiments. Investigation at the cellular, tissue and organ levels will be included. 2 lab hours per week.

Corequisite: BI5510 Human Biology.

BI5515 INTRODUCTORY BIOLOGY I

A 1-semester course; 4 credit hours. A course dealing with the biological principles common to both plants and animals. These principles include the nature of chemical systems, cellular structure and functioning, genetics, ecology, and evolution. 3 class hours and 2 lab hours per week.

BI5516 AQUATIC BIOLOGY

A 1-semester course; 4 credit hours. This introductory course covers aquatic environments and methods for sampling aquatic environments for micro, macro, flora and fauna. Topics include use of microorganisms as indicators of pollution, plankton and larger organisms for bioassay and food production. This is an indoor/outdoor lab oriented course. 3 class hours and one 2-hour lab per week.

BI5519 ANATOMY & PHYSIOLOGY I

A 1-semester course; 4 credit hours. The basic principles of biology are introduced. These are followed by an introduction to the study of the structure and functioning of the human body. Systems covered are: integumentary, skeletal, muscular and nervous. Emphasis will be placed on the interrelationships among the systems. Related topics such as diseases of the systems will be integrated where applicable. Laboratory work will include experiments, dissection, microscope work, and the study of charts and models. 3 class hours and 2 lab hours per week

BI5520 ANATOMY & PHYSIOLOGY II

A 1-semester course; 4 credit hours. A continuation of BI5519. Systems covered are: circulatory, endocrine, reproductive, urinary, digestive and respiratory. 3 class hours and 2 lab hours per week.

BI5525 INTRODUCTORY BIOLOGY II

A 1-semester course; 4 credit hours. Continuation of BI5515 (Introductory Biology I) dealing with the evolution, structure, functioning, and taxonomy of the major groups of plants and animals. 3 class hours and 2 lab hours per week. **Prerequisite:** BI5515 Intro. Biology I or permission of instructor.

BI5530 FUNDAMENTALS OF DISEASE PROCESS

A 1-semester course; 3 credit hours. Topics include causes of disease, cellular injury, inflammatory processes, neoplasms, metabolic disorders, endocrine imbalances, disturbances in blood and body fluids, infectious diseases, physical and chemical injuries, hereditary diseases and congenital defects. A survey of the basic process of disease, types of medication, diagnostic measures and types of treatment will be discussed relating to the following systems: integumentary, musculoskeletal, nervous, cardiovascular, respiratory, gastrointestinal, genitourinary and organs of special sense (eye and ear). 3 class hours per week. **Prerequisite:** BI5519/ BI5520 Anatomy and Physiology I and II or permission of instructor.

BI5540 HUMAN NUTRITION & HEALTH

A 1-semester course; 3 credit hours. This course focuses on current eating practices and their effects on the overall health of the human body. Topics covered include the composition and function of the major food groups and vitamins, product label interpretation, and nutrition's role in disease and wellness. This course is specifically designed for the student interested in proper health maintenance. 3 class hours per week. (Note: This course may be taken alone as a 3 credit biology course OR in conjunction with BI5541 Human Nutrition and Health Laboratory, as a 4 credit biology course.)

BI5541 HUMAN NUTRITION/HEALTH LABORATORY

A 1-semester laboratory course; 1 credit hour. The student will apply those theories and principles of nutrition and health learned in the classroom. Topics to be investigated include nutrient content of the food groups, water quality testing, nutrient intake and calorie calculations, basic exercise and stress reduction techniques. 2 laboratory hours per week. **Corequisite:** BI5540 Human Nutrition and Health.

BI5553 MICROBIOLOGY

A 1-semester course; 4 credit hours. The biology of bacteria, viruses, and microorganisms is studied. Laboratory work emphasizes the sterile technique. Immunology and Biotechnology are discussed. 3 class hours and 3 lab hours per week. **Prerequisite:** One year of intro.biology at the college level or permission of the instructor.

BUSINESS

BU4400 INTRODUCTION TO BUSINESS

A 1-semester course; 3 credit hours. This course will introduce students to the environment in which business is transacted in modern times as well as to major, functional areas of business. Its focus is upon timely issues and contemporary business problems. 3 class hours.

BU4405 INTRODUCTION TO HOSPITALITY & TOURISM

A 1-semester course; 3 credit hours. This course will introduce the student to the global environment in which business is transacted within the hospitality services industry. The course is organized around four major topics: food service, lodging, tourism and management. The major functional areas of business are addressed with focus placed upon the timely issues and business challenges within the hospitality industry. 3 class hours per week.

BU4410 HEALTHCARE PRACTICE SEMINAR

A 1-semester course; 3 credit hours. Designed to study current strategic issues in Healthcare Practice Management that need to be addressed by Healthcare Practice Managers including: legal issues, regulations, environmental changes, health insurance, medical ethics, resource planning and contracts may be included. 3 class hours per week. **Prerequisite:** The student must be matriculated into the Business Management Healthcare Practice Management Program or permission of the instructor.

BU4415 PRACTICE MANAGEMENT PRACTICUM

A 1-semester course; 3 credit hours. Designed to provide experiential opportunities for students planning a career in Healthcare Practice Management. The practicum experience will provide and opportunity to observe and be involved in the planning, monitoring and controlling an operation within a healthcare practice or similar health care operation. This experience will also provide an opportunity to integrate the knowledge and skill developed in other courses within the program. Corequisite: Healthcare Practice Management Seminar. 1 class hour and 8 practicum hours per week.

BU4420 INTERNATIONAL BUSINESS

A 1-semester course; 3 credit hours. An overview of international business with emphasis on how international business transactions differ from domestic. International business transactions, practices and environments influencing these activities will be explained and illuminated through extensive case studies, including focus on ISO9000 quality standards. 3 class hours.

BU4430 BUSINESS SOFTWARE INTEGRATION

A 1-semester course; 3 credit hours. Using the personal computer and state of the art software, the student will learn how to integrate word processing spreadsheet and presentation graphics. Using integrated software presentation graphics, provide attractive usable documents and presentation materials for today's automated office. Lab work outside of class hours will be required to complete assignments. Restricted to Business students. **Prerequisites:** TW6650 Document Processing or equivalent and CT6630 Computer Applications. 3 class hours per week.

BU4450 INTRODUCTION TO ENTREPRENEURSHIP

A 1-semester course; 3 credit hours. Introduction to the role of the entrepreneur and the disciplines and techniques necessary for success in starting a new business venture. Topics include entrepreneurial traits and instincts, setting personal goals, business planning, marketing, capitalization and financial planning; legal, tax, real estate and insurance considerations; small business assistance; government regulations and entrepreneurial career options. 3 class hours per week.

CANCER REGISTRY

MR1101 INTRODUCTION TO CANCER & ITS MANAGEMENT

A 1-semester course; 2 credit hours. This course provides an overview of cancer diagnosis and treatment modalities. It addresses some of the socio-economic, medical psychological and familial problems related to the cancer patient, as well as providing an introduction to the cancer registry (types and purposes). It includes classification of tumors according to tissue of origin and the evolution of various staging systems. 2 class hours per week. **Co-requisites:** MR6605 Medical Language I and BI5519 Anatomy & Physiology I.

MR2101 CANCER CODING, STATISTICS & EPIDEMIOLOGY

A 1-semester course; 3 credit hours. This course includes coding using the ICD-0-10th edition, abstracting and structure and content of source documents. Principles and concepts of staging and coding and practical exercises on abstracting, coding and staging are included. Basic statistical tools of data collection for the cancer registry will be addressed. Students will learn how to prepare reports and read and understand survival analysis data. Principles of Epidemiology will be studied in order to provide an understanding of how data is used in studying factors associated with cancer. 3 class hours per week. **Co-requisites:** BI5520 Anatomy & Physiology II, MR6601 Medical Language II **Prerequisites:** MR1101 Introduction to Cancer and its Management, CT6630 Computer Applications and MA0030 Basic Algebra I.

MR2102 ORGANIZATION & OPERATION OF A CANCER REGISTRY

A 1-semester course; 2 credit hours. This course outlines the organizational characteristics of cancer registries and how they relate to the type and purpose of the registry. It covers the methods used in planning, organizing and operating a registry; the uses of the medical record as the principle source document for data collection and the relationship with the health information department and other department within the hospital. It outlines the content and format of the medical record, record systems and policies of medical record administration. The course includes a description of the relationship of the cancer registrar to health legislation, accreditation standards and funding. It also explores the impact of professional and voluntary organizations. A module covering automate data systems as they relate to the registry is presented. Quality improvement in the cancer registry is covered to interrelate all of these elements. 2 class hours per week. **Co-requisite:** Must be taken concurrently with or subsequent to MR2101 Cancer Coding, Statistics & Epidemiology, BI5520 Anatomy & Physiology II and MR6606 Medical Language II.

MR2190 PRACTICUM FOR CANCER REGISTRARS

A 1-semester eight week course; 2 credit hours. In this practicum students will work for two days per week for eight weeks to receive hands-on experience under the guidance of a qualified Cancer Registrar. Students will be provided with actual cases and medical records of cancer patients. They will abstract information from them directly into a computerized data base. Students will be introduced to all aspects of cancer registry management. With permission of the appropriate personnel at the practicum site, the student will attend and participate in cancer registry conferences. A minimum of 15 hours per week is required. **Prerequisite:** This course must be taken after completion of all other program requirements. Students must provide own transportation. Malpractice insurance is necessary.

CHEMISTRY**CH4401 CHEMISTRY IN YOUR LIFE**

A 1-semester course; 4 credit hours. This course will meet the four-credit natural science requirement of many associate degree programs. The course will be topic oriented. The students will study chemical topics including: nuclear reactions, energy from chemical reactions, water and its problems, chemistry of life, air pollution, drugs and medicines and other chemistry topics which are determined to be of use to the student. Some examples of the experiments would be: recycling aluminum from aluminum cans, dyeing material, determining the amount of vitamin C in orange juice, finding the acid and alkali content of some consumer products, and making soap and electroplating. 3 class hours and 2 lab hours per week.

CH5501 GENERAL CHEMISTRY I

A 1-semester course; 4 credit hours. Deals with inorganic and physical chemistry. The study of the structure of atoms and the periodic nature of the elements. The examination of the relationship of energy and the elements to form compounds and the three physical states of matter will be investigated. 3 class hours and 3 lab hours per week. **Prerequisite:** One year of high school chemistry and one year of pre-college math.

CH5502 GENERAL CHEMISTRY II

A 1-semester course; 4 credit hours. Continuation of General Chemistry I, dealing with physical and inorganic chemistry. The three physical states of matter: solid, liquid and gases will be studied. The mechanical, thermal and electrical changes as demonstrated in solution theory, electrochemistry, chemical kinetics and chemical equilibrium will be examined in detail. Brief introduction to organic chemistry is given. 3 class hours and 3 lab hours per week. **Prerequisite:** CH5501.

CH5503 INTRODUCTORY CHEMISTRY I

A 1-semester course; 4 credit hours. The course covers the basic understanding of atomic structure of the elements and periodic table. The study of chemical bonding, nomenclature, chemical equations, formula calculations and stoichiometry is undertaken. 3 class hours and 2 lab hours per week. **Prerequisite:** A course in algebra.

CH5504 INTRODUCTORY CHEMISTRY II: INORGANIC CHEMISTRY

A 1-semester course; 4 credit hours. Covers the study of solids, liquids, gases, solutions, acids, bases and neutralization. The application of physical chemical theory to inorganic chemistry. A brief review of organic chemistry is undertaken with special emphasis on how this aspect of chemistry relates to biological systems. 3 class hours and 2 lab hours per week. **Prerequisite:** CH5503.

CIVIL TECHNOLOGY**CE6653 STRENGTH OF MATERIALS**

A 1-semester course; 4 credit hours. Designed to acquaint the student with the relationship between externally applied forces and the internally induced stresses in various types of structural members and parts, such as bolts, rivets, shafts, pressure tanks, beams and columns. Also covered is the relationship between the externally applied forces and the resulting deformations. Particular attention is given to beam bending, column loadings, tension in shafts, centroids and moments of inertias and combined stresses in structural elements. 3 class hours and 3 lab hours per week. **Prerequisite:** CE6651 or equivalent.

COMPUTER & HARDWARE NETWORKING**CN5502 ADVANCED PC MAINTENANCE & REPAIR**

A 1-semester course; 3 credit hours. In this course students will augment the knowledge gained in the prerequisite course PC Maintenance & Repair. Topics will include diagnosing and troubleshooting personal computer operating systems as current versions of windows, installing and configuring SCSI devices, basic printer concepts, operations and components, portable systems, (E.g. notebook computers) basic networking concepts, viruses and virus types, Internet access, and customer satisfaction. 2 class hours and 2 lab hours per week. **Prerequisite:** CT5501 PC Maintenance & Repair or equivalent.

CN6647 NETWORK OPERATING SYSTEMS I

A 1-semester course; 4 credit hours. Students will learn how to administer, install and configure Linux, Novell NetWare/ IntraNetware and Windows NT's network operating systems. Network operating systems day to day functions (EX:users, groups, groupsrights, resources, etc...) will be covered. Students will perform administration, installation and configuration with these operating systems in a networking systems environment. Real life network systems examples will be discussed and laboratory work will reflect real world applications. 3 class hours and 2 lab hours per week. **Prerequisites:** CT6645 Introduction to Computer Networks or equivalent.

CN6648 NETWORK OPERATING SYSTEMS II

A 1-semester course; 3 credit hours. This course is a continuation of Network Operating System I where students will learn advanced services and protocols used in Linux, Novel NetWare/Intranetware and Windows NT. Theory and operation of services and protocols used on Intranets and the Internet such as DHCP, DNS, FTP, NNTP, SMTP, SNMP, TCP/IP, WWW and many others will be discussed throughout this course. Students will install and configure many of these services and protocols in different NOS environments. Students completing this course will effectively be able to install and maintain DHCP, DNS, FTP, TCP/IP and WWW services and protocols. 2 class hours and 2 lab hours per week. **Prerequisite:** CN6647 Network Operating Systems I and CT6646 Computer Networks II.

CT5501 PERSONAL COMPUTER MAINTENANCE & REPAIR

A 1-semester course; three credit hours. This introductory course will focus on learning how to setup, operate and maintain a personal computer. Students will gain practical hands-on experience in the following areas: installing software packages, expand computing power, preventative maintenance, diagnostic testing and peripheral interfacing. 2 lecture hours and 2 lab hours per week.

CT6601 FUNDAMENTALS OF DIGITAL LOGIC

A 1-semester course; 3 credit hours. The mechanics of automatic computation including number systems, digital codes, logic gates, Boolean algebra, Karnaugh map simplification, combinational logic, sequential logic, adders, counters shift registers, etc. 3 class hours per week.

CT6603 DIGITAL LOGIC LABORATORY

A 1-semester course; 1 credit hour. Proper interconnection of TTL integrated circuits. Experiments in digital logic circuits using gates, flipflops, counters, etc. 1 3-hour lab per week. **Prerequisite:** Fundamentals of Digital Logic to be taken concurrently or previously.

CT6645 INTRODUCTION TO COMPUTER NETWORKS

A 1-semester course; 3 credit hours. This course serves as an introduction to concepts in Computer Networks with some hands-on training in installing, configuring and managing a network. Different network topologies and transmission media will be covered as well as network operating system fundamentals. 2 class hours and 2 lab hours per week. **Prerequisite:** CT5501 Personal Computer Maintenance & Repair.

CT6646 COMPUTER NETWORKS II

A 1-semester course; 3 credit hours. A continuation of CT6645 Introduction to Computer Networks, this course is designed to give students the additional networking background needed to work with large local area networks (LANs). The course covers communications between computers, computer network theory, network administration, troubleshooting and methods of providing support and training to LAN users. Labs include hands-on experience managing a working LAN. 2 class hours and 2 lab hours per week. **Prerequisite:** CT6645 Introduction to Computer Networks or permission of the instructor.

CT6683 COMPUTER SYSTEM TROUBLESHOOTING

A 1-semester course; 4 credit hours. Overview to the computer system including the architecture of a CPU and computer operations. A study is made of decoding and buffering circuits, memory interfacing and Input/Output interfacing both parallel and serial. These concepts are illustrated via the S-100 bus. Computer system fault analysis and troubleshooting techniques are also covered as are such tools as signature and logic analyzers. 3 class hours and 3 lab hours per week. **Prerequisite:** ET6690 Microcomputers.

COMPUTER & INFORMATION SCIENCES

CT3301 COMPUTER LITERACY FOR HEALTH PROFESSIONALS

A 1-semester course; 1 credit hour. This introductory course will focus on learning how to use the personal computer as a tool in the work environment. The topics will include the basic operating system commands (DOS), shared computer systems, word processing and medical information systems software. 2 lab hours per week

CT3310 COMPUTERS FOR BEGINNERS

A 1-semester course; 3 credit hours. This introductory course will give the student a broad overview in the ways in which the personal computer can be used as a tool in the work environment. The topics will include windows operating system, the mouse, file manager, word processing basics, an overview of other application software, how to get started on-line, security, using and managing electronic mail, the world wide web and its resources including web browsers and search engines, and an independent study component. 2 class hours and 2 lab hours per week.

CT6610 INTRODUCTION TO PROGRAMMING & PROBLEM SOLVING

A 1-semester course; 4 credit hours. This course is a general introduction to programming and problem solving with emphasis on strategies to "discover" solutions. A graphic computer language (LOGO) will be used to implement some solutions. Looping, decision structures, and methods will be introduced. Some solutions will be solved using a spreadsheet. Non-computer problem solving skills will also be developed. 3 class hours and 2 lab hours per week. **Prerequisite:** Basic Computer Literacy.

CT6620 PROGRAMMING I

A 1-semester course; 4 credit hours. This course is an introduction to problem-solving methods and program development. Functional and design specification coding, testing and documentation are emphasized in the development of good programming techniques. Emphasis is placed on Object Oriented Programming, structured thinking, decision structures, looping, arrays, files, and programming a graphical user interface. 3 class hours and 2 lab hours per week. **Prerequisite:** CT6610 Introduction to Programming and Problem Solving with a grade of C or better or MA5615 College Algebra with a grade of C or better.

CT6623 CURRENT TOPICS IN COMPUTER SCIENCE

A 1-semester course; 4 credit hours. Current topics in Computer Science will be selected by the instructor each semester as an in-depth view of a few subjects that will reflect current usage in Computer Science. Labs will be assigned reflecting the semester's topics. As the course topics vary each semester, the course may be retaken for credit as a directed study with permission of the instructor. 3 class hours and 2 lab hours per week. **Prerequisite:** CT6620 Programming I or equivalent.

CT6626 INTRODUCTION TO INFORMATION PROCESSING

A 1-semester course; 4 credit hours. An introductory course focusing on fundamental concepts of information processing and programming in a high level language. Programming topics include: selection, looping, and functions. Computer hardware (input, output, and storage devices), computer history, and computer systems are major topics. Considerable emphasis is placed on programming the computer as a means to understanding how a computer works. 3 class hours and 2 lab hours per week.

CT6630 COMPUTER APPLICATIONS

A 1-semester course; 3 credit hours. This course will focus on the effective use of the computer at home or on the job. Students will gain practical experience in the use of application software for word processing, presentation graphics, electronic spreadsheet, and database management software. 2 class hours and 2 lab hours per week. **Prerequisite:** CT3310 Computers for Beginners or equivalent.

CT6632 DATA MANAGEMENT APPLICATIONS

A 1-semester course; 3 credit hours. This course will focus on data management using spreadsheet and database software. Practical applications and projects will be assigned that will focus on decision-making, querying, graphs and creating customized forms and reports. 2 class hours and 2 lab hours per week. **Prerequisite:** CT6630 Computer Applications or equivalent.

CT6640 PROGRAMMING II

A 1-semester course; 4 credit hours. A continuation of CT6620 emphasizing the development of data structures to organize information in solving problems with computers. Typical structures include arrays, stacks, queues, linked lists, and trees. Laboratory projects will give students the opportunity to implement these data structures. 3 class hours and 2 lab hours per week. **Prerequisite:** CT6620 Programming I or equivalent.

CT6641 INTRODUCTION TO OPERATING SYSTEMS

A 1-semester course; 4 credit hours. An introduction to computer operating systems. Operating systems functions and theory will be covered for a variety of computers from microcomputers to mainframes. Operating system examples and laboratory work will be frequently updated to reflect rapid changes in the field. Other topics include multi-user systems, system use and management. 3 class hours and 2 lab hours per week. **Prerequisite:** A programming language.

CT6642 INTEGRATED COMPUTER APPLICATIONS

A 1-semester course; 3 credit hours. This course will focus on application suites under the windows environment and the data file integration that is made possible between word processing, spreadsheet, database, and graphic files. Compound documents will be created that can include files from all the various application software. The efficient use of these data files for project report preparation and presentation will be the focus. 2 class hours and 2 lab hours per week. **Prerequisite:** CT6630 Computer Applications or equivalent

CT6654 THE INTERNET & WEB PAGE DEVELOPMENT (HTML)

A 1-semester course; 3 credit hours. This course serves as an introduction to using and understanding the Internet and how corporate America conducts business on-line around the world. Topics will include how to design and create Web pages using the current markup languages (HTML), various Web page generators and image editors. Other topics will include Web browsers, search engines or sites, FTP, newsgroups, electronic mail including address books, distribution lists and attaching files. 2 class hours and 2 lab hours per week. **Prerequisite:** CT6630 Computer Applications or equivalent.

CT6655 PROGRAMMING III

A 1-semester course; 4 credit hours. Continuation of CT6640 emphasizing file structures and design. This course covers the concepts, design considerations, and performance differences of file types from sequentially accessed files through relational databases. The file types are examined from the viewpoint of the operating system, the programmer, and system designer using a variety of standard design tools. 3 class hours and 2 lab hours per week. **Prerequisite:** CT6640 Programming II or equivalent.

CT6656 INTERNET LANGUAGES & WEB AUTHORIZING TECHNIQUES I (JAVA SCRIPT)

A 1-semester course; 4 credit hours. An introduction to the design development of interactive software for the World Wide Web using the advanced features of markup languages (HTML) and client-side JavaScript. This course will review basic markup language (HTML) formatting and quickly move onto the advanced techniques for exploring the latest features in the markup (HTML) and JavaScript languages. This course will focus heavily on the use of client-side JavaScript for creating an interactive environment on the WWW. Students will design, develop, and maintain their own interactive Home Page using techniques learned in this course. Topics will include current markup languages (HTML), introduction to JavaScript and advanced JavaScript techniques. 3 class hours and 2 lab hours per week. Prerequisites: CT6654 The Internet & Web Page Development (HTML) and CT6620 Programming I or equivalent.

**CT6657 INTERNET LANGUAGES & WEB AUTHORIZING
TECHNIQUES II (PERL)**

A 1-semester course; 4 credit hours. This course continues on with the design development, and maintenance of interactive software for the World Wide Web with a strong focus on server-based programming. This course will present an overview on common Internet protocols and provide answers to the question "what makes the WWW tick." Emphasis will be placed on state-of-the-art, server-based software development tools that provide interactive browsing of the Web. Students will design, develop, and maintain interactive applications that are modeled after real-world problems. Course topics will include current markup Languages (HTML), CGI programming (Perl), Virtual Reality Markup Language (VRML), and Server-Side JavaScript. 3 class hours and 2 lab hours per week. **Prerequisites:** CT6656 Internet Languages & Web Authoring Techniques I or equivalent.

CT6665 VISUAL BASIC PROGRAMMING

A 1-semester course; 4 credit hours. An introduction to Visual Basic, an object-oriented/event-driven programming language for students with some programming experience. The student will learn to take advantage of the features Visual Basic has to offer, including the creation of window objects such as buttons and scroll bars. The course will include designing, planning, documenting, coding and debugging projects in Visual Basic. Topics covered are selection structures, repetition structures, both sequential and random files and arrays. The level of reasoning required in this course is similar to that required in a college level mathematics course. 3 class hours and 2 lab hours per week.

Prerequisite: CT6626 Introduction to Information Processing and MA0040 Basic Algebra II.

CT6670 INTRODUCTION TO CAD/CAM

A 1-semester course; 3 credit hours. Introduction to Computer Aided Drafting and Design Systems and Computer Aided Manufacturing. It will cover the role of computers, robots, automated production, and humanistic approaches in manufacturing. Students will gain an understanding of the difficulties and challenges that lie on the path toward integration of computers into the manufacturing environment. 3 class hours per week. 1-semester course; 3 credit hours.

CT6672 COMPUTER AIDED DRAFTING

A 1-semester course; 3 credit hours. This course will prepare students to operate Computer Aided Drafting and Design systems and understand the use of computer graphics in industry applications. Students will learn to use an interactive computer. They will store and retrieve drawings and related information on a magnetic disk and produce commercial quality copies using a computer driven plotter. 1 class; hour and 4 lab hours per week. **Prerequisite:** CT6670 Introduction to CAD/CAM and ET6600 Engineering Drafting or ET6601 Engineering Design Graphics.

**CT6681 ADVANCED DATABASE MANAGEMENT
SOFTWARE**

A 1-semester course; 4 credit hours. This course will focus on decision making using management information system software. Emphasis will be on Advanced DataBase and/or other database management software. Software customizing techniques, macros, templates, data tables, program command files, and SQL commands will be covered. 3 class hours and 2 lab hours per week. **Prerequisite:** CT6632 Data Management Applications or equivalent.

CT6682 ENGINEERING COMPUTER APPLICATIONS

A 1-semester course; 4 credit hours. A course for engineering and technology students that covers the principles of computer operation and Fortran programming techniques. Personal computer application software tools will also be used to solve technical problems. 3 class hours and 2 lab hours per week. **Prerequisite:** MA5621 corequisite.

CT6688 C++ PROGRAMMING LANGUAGE

A 1-semester course; 4 credit hours. General study of the C++, including all data types. Emphasis is placed on programming, problem solving, and writing structured, efficient, and robust code. Topics include functions (user defined and built-in), arrays, structures (classes), pointers, linked lists, stacks and queues, sorting (selection, quicksort, insertion), searching (linear and binary), recursion, and inheritance. **Prerequisite:** CT6620 Programming I or equivalent. 3 class hours and 2 lab hours per week.

COOPERATIVE EDUCATION

CO440 Cooperative Education I

A 1-semester course; 3 credit hours. Co-op Education is an experiential course designed to provide training for students seeking to enter or reenter a career field. Students gain practical experiences that are related to their academic program and/or career goals, subject to guidelines established by the appropriate academic department and the Office of Cooperative Education. Each student is expected to complete a career package, interview for a workplace position, establish five training objectives, participate in at least three (3) workshops and one (1) reflection seminar, write a reflection paper, and produce a career portfolio. The student will also produce a self-evaluation by the Job Developer, Faculty Coordinator and Work-Site Supervisor. A minimum of 180 hours of work experience is required per semester. **Prerequisite:** Prior approval of the Job Developer and the Academic Coordinator responsible for the student's program.

CO4402 COOPERATIVE EDUCATION II

A 1-semester course; 3 credit hours. This second course in Co-op Education designed to provide students with the opportunity to build upon skills developed in Co-op I and is subject to the guidelines of the appropriate academic department and the Office of Cooperative Education. Each student is expected to complete a career package, interview for a workplace position, establish five training objectives which clearly state new, or more expansive goals than those in Co-op I, participate in at least three (3) workshops and one (1) reflection seminar, write a reflection paper, and add to their career portfolio. The student will also produce a self-evaluation as part of the reflection experience. The student's progress will be evaluated by the Job Developer, Faculty Coordinator, and Work-Site Supervisor. A minimum of 180 hours of work experience is required per semester. **Prerequisite:** Co-op Education I or Career Internship I and prior approval of the Director of Co-op Education and the academic coordinator responsible for the student's program.

CRIMINAL JUSTICE

CJ3601 CONCEPTS OF CRIMINAL LAW

A 1-semester course; 3 credit hours. This course includes the classification of crime, definitions and elements of specific crimes, parties to a crime and defense of a crime, the substantive law of crimes, its historical development and philosophy. 3 class hours per week.

CJ3603 INTRODUCTION TO CRIMINAL JUSTICE

A 1-semester course; 3 credit hours. Addresses the history, philosophy and function of the criminal justice system in America, and identifies the various subsystems and the role expectations of the system. Also provides an overview of crime, punishment and rehabilitation ethics, as well as the education and training for professionals in the system. 3 class hours per week.

CJ3607 FUNCTIONS OF POLICE IN MODERN SOCIETY

A 1-semester course; 3 credit hours. The functions of police in contemporary society will be analyzed in their historical, sociological, and political context. Particular emphasis will be placed upon the conflicting role expectations facing the police in a democracy. Topics included will be community policing, report writing, police discretion, corruption, leadership, professionalism and other related topics. 3 class hours per week.

CJ3608 INTRODUCTION TO CORRECTIONS

A 1-semester course; 3 credit hours. An introduction and overview of the fundamental processes, trends and practices of correctional institutions. Consideration is given to such concepts as institutional treatment, prisoner rights, community corrections, parole, pre-release centers, and government support of ex-offenders. 3 class hours per week.

CJ3610 INTRODUCTION TO SECURITY

A 1-semester course; 3 credit hours. This course explores various concepts related to the term "security." Emphasis is placed on devising a systems approach to security analysis and implementation. The functions as well as resources of protective services are identified and analyzed. Consideration is given to all aspects of personnel as it relates to security as well as an overview of planning techniques. 3 class hours per week.

CJ3667 CRISIS INTERVENTION IN THE CRIMINAL JUSTICE SYSTEM

A 1-semester course; 3 credit hours. Application of crisis theory, management of interpersonal conflict and use of effective techniques of crisis intervention in Criminal Justice. Specific crisis situations frequently encountered are considered, including, but not limited to, family disputes, rape, child abuse, potential suicide, domestic abuse, hostage situations, and terrorism. 3 class hours per week.

CJ3670 SENIOR SEMINAR/PROJECT

A 1-semester course; 3 credit hours. This course will be taught as a seminar focusing upon special issues in criminal justice, with a primary emphasis on completion of a major project to include a portfolio and/or a major paper which will involve an analysis of an agency within the context of concepts addressed in the Criminal Justice Program and the relevant work experience of the student. It may also be taught as a tutorial with the same individual focus. 3 class hours per week.

CJ3672 FIELD PRACTICUM EXPERIENCE

A 1-semester course; 3 credit hours. Course for preservice students. Planned program of observation in selected criminal justice agencies representing the major components of the system. The student will select an agency provided by the coordinator and assist in activities deemed appropriate by the agency. Students shall be required to maintain a journal as specified by the course instructor/field supervisor. 1 class hour and 8 practicum hours per week. **Prerequisite:** Full-time enrollment in the Criminal Justice Program. Students generally must be in their fourth semester.

CROSS-DISCIPLINARY

CD1000 HONORS COLLOQUIUM

A 1-semester course; 3 credit hours. This interdisciplinary course will introduce honors students to a single broad topic that will be studied from a variety of perspectives. Emphasis will be placed on integration of material, critical thinking, cooperative learning, and independent research. 3 class hours per week. **Prerequisite:** Acceptance into the Honors Program

DENTAL ASSISTANT

DA0101 DENTAL ASSISTING I

A 1-semester course; 9 credit hours. This course addresses the fundamental principles and skill of the chairside dental assistant working in a general dentistry setting; introduces the dental assisting process in areas of four handed dentistry, infection control and the dental materials used by the restorative dentist. The course provides an overview of the specialties of oral and maxillofacial surgery, orthodontics and endodontics and integrates the laboratory and classroom components to provide students with both theory and actual clinical experience. 6 class hours and 9 lab hours per week. **Prerequisite:** Enrollment into the Dental Assistant program or permission of the program coordinator.

DA0115 DENTAL RADIOLOGY I

A 1-semester course; 3 credit hours. This course is designed to examine the theoretical aspects of radiation production, safety, biological effects, paralleling, exposure technique, infection control, darkroom processing, film mounting, radiographic interpretation and extra oral projections. Proficiency in radiographic technique will be accomplished on a manikin. 2 class hour and 3 lab hours per week. **Prerequisite:** Enrollment in the Dental Assistant Program or permission of the program coordinator.

DA0135 DENTAL SCIENCE

A 1-semester course; 3 credit hours. Describes the development, form and function and diseases of the oral cavity by examining oral anatomy, histology, embryology, head and neck anatomy, pathology and pharmacology. 3 class hours per week. **Prerequisite:** Enrollment in the Dental Assistant Program or permission of the program coordinator.

DA0202 DENTAL ASSISTING II

A 1-semester course; 4 credit hours. A continuation of Dental Assisting I. Describes the fundamental principles and chairside skills in the areas of nutrition counseling, preventive plaque control and in the specialties of periodontics, prosthodontics and pediatric dentistry as well as techniques to assist with the management of medical and dental emergencies. 2 class hours and 4 lab hours per week. **Prerequisite:** Dental Assisting I with a grade of C or better.

DA0250 DENTAL RADIOLOGY II

An 8-week course; 1 credit hour. This course is a continuation of Dental Radiology I. The bisecting angle technique of exposing dental films will be studied. Proper radiographic technique will be developed on a manikin prior to exposing radiographic on patients. 4 lab hours per week. **Prerequisite:** Dental Radiology I with a grade of C or better.

DA0275 DENTAL SEMINAR

An 1-semester course; 1 credit hour. Provides the student with an opportunity to analyze dental assisting procedures, patient care in the dental office and practicum experiences, and to hear scheduled guest lecturers from the dental community. 1 class hour per week. **Prerequisite:** A grade of C or better in all Dental Assistant courses.

DA0280 DENTAL ASSISTING PRACTICUM

A 1-semester course; 5 credit hours. This course requires a minimum of 300 hours of clinical experience in various dental offices where the student will perform chairside dental skills under the supervision of the dentists and their staff. Students will be assigned on a rotational basis with emphasis on general dentistry. Liaison with the students and the dental offices is maintained by the Coordinator of the Dental Assistant Program. 20 practicum hours per week. **Prerequisite:** A grade of C or better in all Dental Assistant courses prior to practicum assignment.

DIALYSIS PATIENT CARE TECHNICIAN

DT1010 OVERVIEW OF DIALYSIS

A 1-semester course; 2 credit hours. This course explores the professional duties of the dialysis technician. Topics include hemodialysis basics, infection control, patient responsibilities, career opportunities and certification of the dialysis technician. A unit on medical legal jurisprudence and appropriate medical record documentation is included. 2 class hours per week.

DT1011 FUNDAMENTALS & PRINCIPLES OF DIALYSIS

A 1-semester course; 4 credit hours. This course includes normal renal anatomy and physiology as well as the causes, stages and complications of renal failure. Various modalities of treatment are covered. The psychological needs of the patient are discussed; nutritional considerations are included. A unit on pharmacological treatment of the renal compromised patient is included, as well as the laboratory tests which are usually done and their implications. 4 class hours per week. **Prerequisite:** DT1010 Overview of Dialysis and MS3010 Phlebotomy or its equivalent or satisfactory demonstration of the skill.

DT1020 HEMODIALYSIS PROCEDURES

A 1-semester course; 10 credit hours. This course covers the various modalities utilized in the hemodialysis delivery system. Pre-dialysis procedures, monitoring during dialysis and post-dialysis procedures are covered. General procedures such as infection control, medications, documentation, complications and laboratory tests are emphasized. Dialyzer reprocessing procedures are included. A unit on the purpose, components and monitoring of a water treatment system is also included. 10 class hours per week. **Prerequisite:** DT1011 Fundamentals and Principles of Dialysis. **Corequisite:** DT1021 Dialysis Patient Care Technician Practicum.

DT1021 DIALYSIS PATIENT CARE TECHNICIAN PRACTICUM

A 4-credit hour course. This course requires a minimum of 240 hours of experience in a dialysis unit. During the practicum, the student will have the opportunity to practice and refine the skills utilized in an acute or chronic dialysis facility. Through the mentorship process and under supervision, the student will function as a member of the health care team. 16 practicum hours per week. **Corequisite:** DT1020 Hemodialysis Procedures.

EARLY CHILDHOOD EDUCATION

Note: All courses prefaced CC and ECE are restricted to students accepted and enrolled in the Early Childhood Education program. Other students may elect these courses only with the permission of the Early Childhood Education program coordinator.

CC2201 INTRODUCTION TO EARLY CHILDHOOD EDUCATION

A 1-semester course; 3 credit hours. Provides the student with an understanding of the child's experience in the school as it relates to his/her total development. It raises particular problems associated with curriculum planning and helps to develop criteria for evaluating a program for young children. 3 class hours per week.

CC2230 EARLY CHILDHOOD EDUCATION: THEORY & PRACTICE

A 1-semester course; 4 credit hours. Provides the student with an understanding of the child's experience in the school as it relates to his/her total development. It raises particular problems associated with curriculum planning and helps to develop criteria for evaluating a program for young children. The course will examine the historical development of early childhood education programs and services, the present prototypes and the universal elements contained in good programs. Defined areas of child behavior in varied educational settings will be observed and recorded. 3 class hours per week and 3 laboratory hours per week in varied educational settings.

CC2233 PLANNING PROGRAMS & ENVIRONMENTS FOR YOUNG CHILDREN

A 1-semester course; 3 credit hours. Examines the environments and programs planned for young children and helps students to develop the skills necessary to create environments which promote growth and provide for the needs of young children. Goals of the program, interest centers and the development of positive management techniques for working with children both individually and in groups are stressed. 3 class hours per week.

CC2236 LEARNING ENVIRONMENTS FOR INFANTS & TODDLERS

A 1-semester course; 3 credit hours. Focus on the unique requirements of caring for infants and toddlers in group settings. Addresses the criteria as advocated by the National Association for the Education of Young Children. Course content explores quality care for this age group, discusses growth and development of infants and toddlers, and helps participants develop concrete curriculum activities. Other topics addressed are appropriate equipment, safety issues, observation techniques and problem areas in infant/toddler relations. 3 class hours per week.

CC2240 EXPRESSIVE LEARNING ACTIVITIES IN EARLY CHILDHOOD CURRICULUM

A 1-semester course; 3 credit hours. This course explores the role of creative expression as a learning tool in the social, emotional and cognitive development of the young child. Students will gain an understanding of how to plan and implement activities that integrate the arts of music, movement, poetry, and dramatic play into the early childhood curriculum. A variety of manipulative materials will be explored as emphasis will be placed on designing appropriate learning activities for the young child. This course will also introduce the student to the use of audio-visual media used in the early childhood classroom. 3 class hours per week.

CC2244 ENHANCING CREATIVITY IN EARLY CHILDHOOD CURRICULUM

A 1-semester course; 3 credit hours. Designed to aid the teacher of young children in planning developmentally appropriate art activities in the early childhood curriculum. The course is structured so that students work both individually and in groups in order to explore curriculum concepts and personal ideas through the use of art materials. Emphasis is placed on spontaneity, flexibility and invention in the ability to develop materials and activities appropriate to the age, developmental level and special needs of the young child. 3 class hours per week.

CC2245 LANGUAGE & READING DEVELOPMENT IN EARLY CHILDHOOD

A 1-semester course; 3 credit hours. An imaginative and creative approach to teaching readiness skills through literature for the preprimary child. Behavioral characteristics of young children and their implications relating to books will be the focus of the course. Picture books, storytelling, folk tales, fantasy, puppetry, dramakinetics, reading aloud, oral language development along with guidelines for assisting the child in becoming more ready for beginning reading instruction will be explored and demonstrated. This course is directed primarily to anyone who is or who seeks to work with the pre-school child. 3 class hours per week.

CC2250 PRESCHOOL CURRICULUM

A 1-semester course; 3 credit hours. Designed to aid the teacher of young children in planning a developmentally appropriate integrated curriculum for the early childhood classroom. It will look at the child's cognitive growth and development and how it is enhanced through math, social studies and language. Students will be exposed to designing learning environments which enhance the growth and development of the whole child and which respects individual differences in children's growth. 3 class hours per week

CC2260 MATH/SCIENCE FOR EARLY CHILDHOOD CURRICULUM

A 1-semester course; 3 credit hours. This course is designed to introduce the content and methods of teaching math and science in early childhood. Students will develop skills in planning and presenting curriculum in these content areas. Emphasis will be placed on establishing a learning environment which encourages problem solving and the mastery of basic skills through concrete activities and manipulative materials. Students will also explore an integrated approach to curriculum by connecting math and science concepts to other areas of knowledge. 3 class hours per week.

CC2264 SEMINAR IN PHILOSOPHY OF EARLY CHILDHOOD EDUCATION

A 1-semester course; 3 credit hours. Students are given the opportunity to summarize and analyze their understanding of the theories and practices in early childhood education and the role of the professional in this field. An informal lecture/discussion format allows for analysis of practicum experience as well as for community resource guest lecturers and independent research. 3 class hours per week.

CC2312 EARLY CHILDHOOD EDUCATION PRACTICUM I

A 1-semester course; 3 credit hours. Under the guidance and supervision of the cooperating teacher, skills and concepts of child growth, development and learning acquired in CC2230 Early Childhood Education: Theory and Practice or CC2201 Introduction to Early Childhood Education and CC2244 Enhancing Creativity in Early Childhood Curriculum will be applied by the student in selected practicum placements. 1 class hour and 8 practicum hours per week. **Prerequisite:** CC2230 or CC2201 and CC2244 and PS1151 which must be taken previously or simultaneously.

CC2353 EARLY CHILDHOOD EDUCATION PRACTICUM II

A 1-semester course; 4 credit hours. The student will be actively involved in the varied activities which constitute the curriculum of early childhood education classrooms and educational programs. Under the supervision of a cooperating teacher, the student will become more familiar with the role and responsibilities of the professional in early childhood education settings. 1 class hour and 12 practicum hours per week. **Prerequisite:** CC2312.

CC2354 EARLY CHILDHOOD EDUCATION PRACTICUM III

A 1-semester course; 4 credit hours. 16 hours of experience in the early childhood classroom or educational program allows the student both greater involvement in the program and an increased familiarity with the role and responsibilities of the early childhood education professional. 16 practicum hours per week. **Prerequisite:** CC2312, CC2353.

CC2450 CHILD CARE ADMINISTRATION

A 1-semester course; 3 credit hours. Designed for the director or lead teacher who needs to enhance their administrative skills. Course content will include information related to the responsibilities of the child care director, leadership styles, financial management, personnel management, licensing regulations and a study of both state and national day care legislation. Particular attention will be focused on the role of the administrator in developing and implementing both evaluation and staff development strategies for child care staff, which serve to strengthen performance as well as administrative/staff relations. 3 class hours per week.

ECE120 CURRICULUM IN SCHOOL-AGE CHILD CARE

A 1-semester course; 3 credit hours. This course will study the learning process in school-age programs with emphasis on curriculum development for children ages 6-12 who are in programs outside school time. This course will include a focus on the identification of children's needs as a means of determining appropriate curriculum, steps in curriculum planning, and the elements of developmentally appropriate practice in carrying out curriculum with school-age children. Specific focus will be on areas such as recreational activities, cognitive activities (i.e. critical thinking and problem solving) communication skills, and creative and social skill activities (i.e. cooperative play and learning, emotional expression and self-esteem, conflict resolution, etc.). Students will study curriculum as a means of determining appropriate use of out-of-school time and to determine the role of the staff member in planning and implementing curriculum activities. Assignments are designed to provide practical application of the ideas studies. 3 class hours per week. **Prerequisite:** PS1205 Human Growth & Development through Adolescence or permission of the instructor.

ECE220 FAMILY & COMMUNITY SYSTEMS IN SCHOOL- AGE PROGRAM

A 1-semester course; 3 credit hours. This course will study the relationship of parents and the community to school age care including after school care, recreation programs, and residential care facilities. It will focus on the importance of the family unit and the community's connection to the child. Exploration of the family's need for aid in parenting skills and caregiving, the importance of the development of resources to aid in supporting family needs, parental involvement and diversity will be emphasized. 3 class hours per week. **Prerequisite:** PS1205 Human Growth & Development through Adolescence or permission of the instructor.

ECE221 ADMINISTRATION & SUPERVISION OF SCHOOL- AGE PROGRAMS

A 1-semester course; 3 credit hours. This course is designed for staff working in school-age programs who need to enhance their knowledge and understanding of the administrative skills required in quality programming. Course content will include a study of administrative procedures and practices such as leadership development, financial management, regulatory requirements, programming and personnel functions. Emphasis will be placed on the development of communication skills which foster advocacy for children and for their families. 3 class hours per week. **Prerequisite:** PS1205 Human Growth & Development through Adolescence or permission of the instructor.

ECE290 SCHOOL-AGE CHILD CARE PRACTICUM

A 1-semester course; 3 credit hours. This course is designed to provide students with the opportunity to enhance and perfect their skills as they practice the profession of school-age child care. Under the supervision of the college instructor, the student will demonstrate the skills and concepts of developmentally appropriate curriculum for children in programs outside of school time; an understanding of the role parents; the relationship of the community to school-age child care; and the utilization of supervision techniques in the administration of school-age programs. This course will require the student to integrate and analyze the competencies and theories addressed in prior courses. 8 practicum hours and 1 class hour per week. **Prerequisites:** PS1205

Human Growth & Development Through Adolescence, ECE120 Curriculum in School-Age Child Care, ECE220 Family & Community Systems and enrollment or completion of ECE221 Administration and Supervision of School-Age Programs.

EARTH SCIENCE

ES5010 EARTH SCIENCE

A 1-semester course; 3 credit hours. A survey of the earth sciences. This course will examine various earth systems and processes including the earth as a planet, the atmosphere and weather, the oceans, the solid earth and its minerals, and such processes as volcanism, weathering, glaciation, erosion and tectonics. This course should not be taken by students who have had Physical Geology or Meteorology, 3 class hours per week.

ES5501 METEOROLOGY

A 1-semester course; 4 credit hours. A basic study of the elements which constitute weather: temperature, pressure, winds, humidity and precipitation. Further study includes weather data analysis and forecasting, and the relationships between weather and climate. 3 class hours and 2 lab hours per week.

ES5502 PHYSICAL GEOLOGY

A 1-semester course; 4 credit hours. Introduction to landforms and the processes of their formation: erosion by wind, water, ice, beaches and wave action. Further study is accomplished through the use of topographic maps. Additional topics include descriptions of basic rocks and minerals, volcanism, mountain building and crustal movement. 3 class hours and 2 lab hours per week.

ECONOMICS

EC3322 MICRO ECONOMICS

A 1-semester course; 3 credit hours. Introduction to micro economics. This semester centers upon the functioning of individual markets and their effectiveness for resource allocation. Includes price and production theory, the distribution of income, and the theory of household behavior. 3 class hours per week.

EC3323 MACRO ECONOMICS

A 1-semester course; 3 credit hours. Introduction to macro economic analysis and policy. Examination of the foundation and nature of economic principles as they apply to national output, money and banking and monetary and fiscal policy. Course also focuses on problems of employment, inflation and economic growth as illuminated by modern national income analysis. 3 class hours per week. **Prerequisite:** EC3322.

EC3652 SURVEY OF ECONOMICS

A 1-semester course; 3 credit hours. A nontechnical survey of current economic problems. Background of economic concepts and terminology. Some focus on comparative economic systems. Not recommended for transfer students. 3 class hours per week.

EDUCATION

ED2310 INTRODUCTION TO TEACHING

A 1-semester course; 3 credit hours. This course is designed for students who want to explore possibilities in education, particularly teaching, as a career. The historical, philosophical, social and methodological aspects of learning and teaching are unifying themes throughout this course. 3 class hours per week **Prerequisite:** EN4401 English Composition I

ED2320 ISSUES & TRENDS IN EDUCATION

A 1-semester course; 3 credit hours. Participants in this course will explore current issues in the field of education and discover popular trends in curriculum content and teaching practices. Students will also discover how society influences both the role of schools and how classrooms function. Issues and trends will be examined and evaluated from the point of view of the learner, teacher, administrator and parent. 3 class hours. ED2321 Issues and Trends in Education: Practicum may be taken simultaneously with this course.

ED2321 ISSUES & TRENDS IN EDUCATION: PRACTICUM

A 1-semester course; 1 credit hour. Participants will spend 4 or more hours a week at a field placement site where they will observe classroom activities and better develop their understanding of the teaching profession. Students will be supervised by a mentor teacher in the field site but will report back to the instructor and share their experiences with fellow students. 4 practicum hours per week. **Prerequisite/Corequisite:** ED2320 Issues and Trends in Education.

ED2322 INTRODUCTION TO TEACHING PRACTICUM

A 1-semester course; 1 credit hour. Students will be exposed to a diversity of educational settings and develop an understanding of the interconnections between the different sectors of education. Students will gain experiences from observations, interviews and field visits. Students will record what they have learned through the use of reports and journals. 4 hours of field experience per week. **Prerequisite:** EN4401 English Composition I

ELECTRONICS

ET6010 INTRODUCTION TO MEDICAL ELECTRONICS & CLINICAL SAFETY

A 1-credit course which will include an overview of biomedical technology, the overview of clinical safety, principles of medical transducers and medical equipment applications. Safety standards prescribed by hospitals/clinics and medical offices will be discussed and observed. 1 class hour per week.

ET6030 FUNDAMENTALS OF MEDICAL ELECTRONICS

A 1-semester course; 4 credit hours. Basic electronics essential to understanding of medical electronics equipment. Included are transducers, diodes, semiconductors, amplifiers, operational amplifiers, differential amplifiers and instrumentation amplifiers. 3 class hours and 3 lab hours per week. This course is not open to students who have completed ET6672 Electronics I.

ET6040 MEDICAL ELECTRONICS SYSTEMS

TROUBLESHOOTING

A 1-semester course; 3 credit hours. Includes hands-on laboratory training in troubleshooting techniques and repair approaches for common medical equipment used to monitor blood pressure, cardiac function, pulmonary function, EEG, etc. 2 class hours and 2 lab hours per week. **Prerequisite:** ET6010 and ET6030.

ET6600 ENGINEERING DRAFTING

A 1-semester course; 3 credit hours. The application of the basic skills needed to make and read sketches and drawings. Students will use drafting instruments and will learn to perform the operations of the trade including the inspection of the completed work. The course will include lettering, sketching, and dimensioning with applications in sectioning and views of primary and secondary engineering drawings. 1 class hour and 4 lab hours per week.

ET6601 ENGINEERING DESIGN GRAPHICS

A 1-semester course; 2 credit hours. Stresses communication by graphical or pictorial means. Lettering, graphics sketching, orthographic projection, auxiliary views, dimensioning and descriptive geometry principles are topics covered. Neatness is emphasized throughout. An introduction to menu driven CAD is included. 1 class hour and 2 lab hours per week.

ET6611 CIRCUIT ANALYSIS I

A 1-semester course; 4 credit hours. Introduction to the analysis of electric circuits using DC sources. Applications of Kirchhoff's Voltage and Current Laws, superposition, loop analysis, nodal analysis and Thevenin's Theorem. 3 class hours and 3 lab hours per week. **Prerequisite:** MA5621 to be taken concurrently or previously.

ET6612 CIRCUIT ANALYSIS II

A 1-semester course; 4 credit hours. Extension of the theorems developed in ET6611 as they apply to circuits excited by sinusoidal sources. Energy considerations, storage of energy, RMS calculations, determinant solutions, resonance and transformers. 3 class hours and 3 lab hours per week. **Prerequisite:** ET6611 and MA5621.

ET6645 ROBOTICS

A 1-semester course; 4 credit hours. A course in robot fundamentals. History of development of modern robots and their applications; mechanical aspects of manipulators and end effectors; electrical, hydraulic and pneumatic drives; sensors; computer control; robot software; vision systems. Also includes social, psychological and economic effects of robotics. 2 lecture hours and 6 lab hours per week. **Prerequisite:** ET6690 Microcomputers, may be taken concurrently.

ET6651 ENGINEERING MECHANICS I—STATICS

A 1-semester course; 3 credit hours. Development of fundamental concepts of mechanics such as vectors, forces and moments. Detailed treatment of free body diagrams and their application to force systems. Laws of static equilibrium, friction forces, first and second moments, and problems involving various structures and machine parts. Methods of solution will include vector analysis, matrix methods and computer-aided analysis. 3 class hours per week. **Prerequisite:** PI5623 and MA5692 or equivalent. MA5692 may be taken concurrently.

ET6652 ENGINEERING MECHANICS II—DYNAMICS

A 1-semester course; 3 credit hours. Basic laws of kinematics of particles and rigid bodies involving linear, angular, relative and absolute motion. Newton's Laws and their application to the kinematics of rigid bodies in translation, rotation and plane motion; and the principles of work, kinetic energy, impulse and momentum. Methods of solution will include vector analysis, matrix methods and computer-aided analysis. 3 class hours per week. **Prerequisite:** ET6651.

ET6661 NETWORKS I

A 1-semester course; 5 credit hours. Introduction to general network solutions employing mathematical models and topology, the study of circuit analysis employing Kirchhoff's laws, Thevenin's Theorem, Norton's Theorem, superposition and maximum power theorems, is emphasized. 4 class hours and 4 lab hours per week. **Prerequisite:** MA5693 to be taken concurrently or previously.

ET6662 NETWORKS II

A 1-semester course; 5 credit hours. Sinusoidal analysis of circuits employing phasor analysis. Sinusoidal steady state response found by nodal, mesh, superposition, source transformations. Thevin's Theorem and phasor diagrams are explained. RMS values and average power and complex power is studied in detail. Major emphasis is placed on analysis using complex frequency (S-Plane). This would include frequency response of RL, RC, and RLC circuits (including resonance). The remainder of the course deals with two port network parameters and Fourier series analysis. 4 class hours and 3 lab hours per week. **Prerequisite:** ET6661, MA5685 concurrently.

ET6672 ELECTRONICS I

A 1-semester course; 5 credit hours. First course beginning with introductory semiconductor physics and semiconductor devices. Biasing and stability of devices and small signal models of same. Applications of semiconductors in rectifiers and amplifiers. Field effect transistors. 4 class hours and 1 3-hour lab per week. **Prerequisites:** ET6611, ET6612 concurrently.

ET6673 ELECTRONICS II

A 1-semester course; 5 credit hours. Analysis of the behavior of multistage amplifiers, power amplifiers, tuned circuit amplifiers, feedback amplifiers and oscillators. Integrated circuits, including differential and operational amplifiers and voltage regulators. 4 class hours and 1 3-hour lab per week. **Prerequisite:** ET6672.

ET6682 DIGITAL ELECTRONICS

A 1-semester course; 4 credit hours. Study of traditional logic design as well as newer techniques utilizing MSI and LSI. Both combinational logic and sequential logic are covered including registers and counters. Also includes an introduction to memory and programmed logic. 3 class hours and 1 3-hour lab per week. **Prerequisites:** ET6612, ET6672, CT6601.

ET6683 DIGITAL COMMUNICATIONS

A 1-semester course; 3 credit hours. A continuation of Digital Electronics with emphasis on digital communication techniques including modulation methods, modems and local area networks. 3 class hours per week. **Prerequisite:** ET6682 Digital Electronics.

ET6684 ELECTRONIC COMMUNICATION SYSTEMS

A 1-semester course; 4 credit hours. This advanced electronic technology course covers types and characteristics of electronic systems such as amplitude modulation, frequency modulation and single-side-band. Receivers, transmitters and their system components including phase locked loops, tuned amplifiers, modulators and demodulators are also covered. 3 class hours and 1 3-hour lab per week. **Prerequisites:** ET6612, ET6672, ET6673 and MA5622.

ET6690 MICROCOMPUTERS

A 1-semester course; 4 credit hours. Introduction to microprocessors including basics of the CPU, timing and addressing instruction sets, assembly language programming, memory, input/output techniques, interfacing. 3 class hours and 3 lab hours per week.

Prerequisite: CT6601.

ET6691 SEMICONDUCTOR MANUFACTURING OVERVIEW

A 1-semester course; 1 credit hour. This course is a brief overview of semiconductor manufacturing, including an introduction to the equipment, materials, and processes from material preparation to packaging; introductory atomic theory, including the structure of atoms, ions, and molecules and the electrical conductivity of materials; overview of the wafer-fabrication process in the manufacturing of MOS transistors, including safety hazards in the manufacturing process, prevention and safety regulations; contamination control including cleanroom protocol and wafer cleaning. One class hour per week.

ET6692 VACUUM TECHNOLOGY

A 1-semester course; 2 credit hours. The course is an introduction to vacuum technology as applied in semiconductor process applications. Also included is the control instrumentation that is used to monitor and control vacuum processes such as vacuum gauging techniques and thermal mass flow controllers. 1 class hour and 2 lab hours per week. **Prerequisites:** PI5621 Applied Physics I and PI5622 Applied Physics II, or equivalent.

ET6693 INTERNSHIP IN SEMICONDUCTOR MANUFACTURING

A one-semester course; 1 credit hour. Practical experience in semiconductor manufacturing. This experience is an opportunity to put into practice the theory of techniques acquired in the classroom. During this experience students are expected to keep a notebook on their experiences. Students develop lists of objectives to be accomplished during the work experience and will be evaluated by the worksite supervisor, the academic coordinator and the student at the end of the semester. On occasion, off or on-site student conferences may be scheduled. A minimum of 45 hours of unpaid work is required during the semester. **Prerequisite:** ET6691 Semiconductor Manufacturing Overview and ET6692 Vacuum Technology and approval of the academic coordinator and the director of Cooperative Education.

ENGLISH**EN0211 ESL CORE ENGLISH I**

A 1-semester course; 8 credit hours. Introduction to American English for non-English speakers. Develops base for further language training, including the ability to handle simple questions and answers within a limited range of basic topics. **This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course.** 12 contact hours per week. **Prerequisite:** ESL Test.

EN0212 ESL CORE ENGLISH II

A 1-semester course; 8 credit hours. Second level structure course for non-native speakers of English. Includes mastery and integration of introductory grammar sequence and basic vocabulary. **This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course.** 12 contact hours per week. **Prerequisite:** ESL Test.

EN0213 ESL CORE ENGLISH III

A 1-semester course; 8 credit hours. Third level structure course for non-native speakers of English. Includes review and integration of major English tenses and development of core vocabulary. **This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course.** 12 contact hours per week. **Prerequisite:** ESL Test.

EN0214 ESL CORE ENGLISH IV

A 1-semester course; 8 credit hours. Fourth level structure course for non-native speakers of English. Includes introduction to clause-structure grammar and practice integrating core vocabulary into complex sentences. **This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course.** 12 contact hours per week. **Prerequisite:** ESL Test.

EN0215 ESL ACADEMIC ENGLISH I

A 1-semester course; 4 credit hours. Development of academic vocabulary and usage for college writing and speaking. For non-native speakers of English. Includes analysis of syntax and vocabulary in context, and techniques for writing about readings. **Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course.** 6 contact hours per week. **Prerequisite:** ESL Test.

EN0216 ESL ACADEMIC ENGLISH II

A 1-semester course; 4 credit hours. Integration of academic vocabulary and usage in college reading, writing, and speaking. Includes analysis of and writing about readings and study of derived word forms. **Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course.** 6 contact hours per week. **Prerequisite:** ESL Test.

EN0221 ESL READING I

A 1-semester course; 4 credit hours. Reading in English for beginners who are non-native speakers of English. Includes introduction to English graphemes and basic English phonics, and builds a reading vocabulary of 500 to 800 basic English words. This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course. 6 contact hours per week. Prerequisite: ESL Test.

EN0222 ESL READING II

A 1-semester course; 4 credit hours. Second level reading course for non-native speakers of English. Includes comprehension of vocabulary in context, English phonics, dictionary skills, inflected forms, and individualized reading practice. This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course. 6 contact hours per week. Prerequisite: ESL Test.

EN0223 ESL READING III

A 1-semester course; 4 credit hours. Third level reading course for non-native speakers of English. Includes study of prefixes and suffixes, dictionary skills, comprehension of vocabulary in context, and development of reading fluency through individualized reading assignments. This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course. 6 contact hours per week. Prerequisite: ESL Test.

EN0224 ESL READING IV

A 1-semester course; 4 credit hours. Fourth level reading course for non-native speakers of English. Includes study of word formation, dictionary skills, development of academic study skills, comprehension of general vocabulary in context, and development of reading fluency through individualized assignments. This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course. 6 contact hours per week. Prerequisite: ESL Test.

EN0225 ESL ACADEMIC READING

A 1-semester course; 4 credit hours. Highest level reading course for non-native speakers of English. Includes academic vocabulary in context, word analysis, dictionary skills, and development of reading fluency through individualized reading assignments. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course. 6 contact hours per week. Prerequisite: ESL Test.

EN0231 ESL COMMUNICATION I

A 1-semester course; 4 credit hours. Phonology course for beginners who are non-English-speakers. Develops fundamental listening and pronunciation skills. This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course. 6 contact hours per week. Prerequisite: ESL Test.

EN0232 ESL COMMUNICATION II

A 1-semester course; 4 credit hours. Second level communication course for non-native speakers of English. Develops basic communication skills in speaking and writing. This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course. 6 contact hours per week. Prerequisite: ESL Test.

EN0233 ESL COMMUNICATION III

A 1-semester course; 4 credit hours. Third level communication course for non-native speakers of English. Develops general conversation and writing skills using topical vocabulary. Writing skills include outlining and composition organization. This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course. 6 contact hours per week. Prerequisite: ESL Test.

EN0234 ESL COMMUNICATION IV

A 1-semester course; 4 credit hours. Fourth level communication course for non-native speakers of English. Develops academic listening, speaking, and writing skills using general academic vocabulary and situations. This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course. 6 contact hours per week. Prerequisite: ESL Test.

EN0235 ESL PRONUNCIATION

A 1-semester course; 4 credit hours. Drill and practice around a systematic presentation from an articulatory point of view of American English pronunciation. Includes phonemes, allophones, linking, liaison, and major reduction patterns. Required of all ESL students who are above EN0232 ESL Communication II, but whose "Pronunciation" is a "2" or lower on the "ALIGU" Oral Rating Form (American Language Institute, Georgetown University). This is a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course. 2 class hours, 4 lab hours per week. Prerequisite: a "C" or better in EN0232 ESL Communication II or a test.

EN0400 BASIC READING

A 1-semester course; 3 credit hours. Designed to help students improve their basic reading skills. Through group and individualized instruction, the course helps the student develop the skills, habits and attitudes that will result in more effective reading. Topics include word analysis, vocabulary development, comprehension techniques and study skills. Instructional materials are at an appropriate level. Much attention is given to the development of individualized skills in the Reading Center and for this reason pre and post-diagnostic tests are given. This course is considered a developmental course and does not carry graduation credit. It is not usually transferable. Since this is a mandated course, students who do not meet the exit criteria will be required to repeat this course. Basic Reading must be followed by College Reading to complete the developmental reading sequence. 3 class hours and 1 lab hour per week.

EN0401 COLLEGE READING

A 1-semester course; 3 credit hours. This course is designed to meet a variety of more advanced reading and study skill needs, primarily the need to read college level materials more effectively. Students learn to recognize main ideas, to read an article or chapter and remember its key points, to take inclusive, meaningful notes, to read actively and critically, to explore memory techniques and to respond to our language with greater vocabulary depth.

This course is considered a developmental course and does not carry graduation credit. It is not usually transferrable. Students who do not achieve a grade of C- or better will be required to repeat this course. Prerequisite: Satisfactory completion of Basic Reading or referral through assessment testing. 3 class hours and 1 lab hour per week.

EN4400 BASIC WRITING

A 1-semester course; 3 credit hours. This course is designed for students who need to improve the writing skills necessary to succeed in English Composition I. It emphasizes the composition of essays with further work on sentence and paragraph structure. Attention is also given to punctuation, grammar and spelling on an individualized basis. This course does not satisfy any part of the English Composition requirement for graduation. Students who do not pass the required writing assessment must take this course; other students may enroll on the basis of a faculty advisor's or counselor's referral, or permission of the instructor. Students for whom English is a second language are required to have successfully completed ESL Core English IV or have equivalent knowledge. The instructor will require 1/2 hour/week of additional lab. In order to proceed to English Composition I, students must pass a writing assessment given as the final exam in this course. **This is a mandatory developmental course that does not carry graduation credit and may not be transferable.** 2 class hours and 2 lab hours per week. Corequisite: Students must have assessed into Basic Reading or above.

EN4401 ENGLISH COMPOSITION I

A 1-semester course; 3 credit hours. Required course to develop clear, effective writing. Students will demonstrate their competence through a variety of writing assignments including essays and a research paper. 3 class hours per week. Prerequisite: Students entering English Composition I will be required to complete a writing sample which will be evaluated by a departmental committee. Students will be placed in either Composition I or a preparatory program more appropriate to their needs. Students are also required to have successfully completed Basic Reading or placed above this reading level on the assessment test. Note: A grade of C- or better in English Composition I is required for entry into English Composition II.

EN4402 ENGLISH COMPOSITION II

A 1-semester course; 3 credit hours. Required course which is a continuation of English Composition I with emphasis on longer analytic and argumentative papers and style. Readings and materials which will vary from section to section will be employed as the basis for a range of essays such as reports, evaluations, literary criticism, reviews, film criticism and research papers. 3 class hours per week. Prerequisite: Completion of EN4401 English Composition I with a grade of C- or better.

EN4403 CREATIVE NON-FICTION

A 1-semester course; 3 credit hours. This seminar in writing beyond the freshman level is designed for students seriously interested in writing. Types of both non-fiction and fiction will be examined as guides in the development of writing style. Students will work on longer writing projects of their own design. 3 class hours per week. Prerequisite: EN4402 English Composition II or permission of instructor.

EN4405 CREATIVE WRITING

A 1-semester course; 3 credit hours. A seminar for students who wish to write poems, narratives, plays, or filmscripts, this introductory course will present student writing for discussion with attention to the possibilities of revision and professional writing for examination of technique and critical theory. 3 class hours per week.

EN5101 JOURNALISM I

A 1-semester course; 3 credit hours. The course provides training in the fundamentals of news gathering, evaluation, and the structure and writing of journalistic stories. Required: publication of at least six stories in the campus newspaper, *The Observer*. 3 class hours per week.

EN5102 JOURNALISM II

A 1-semester course; 3 credit hours. This course focuses on advanced reporting and writing techniques, including feature and editorial writing. Students are required to assist in the production of *The Observer* and to publish in it at least six in-depth articles. 3 class hours per week. Prerequisite: EN5101 Journalism I or permission of the instructor.

EN5103 JOURNALISM PRACTICUM

A 1-semester course; 3 credit hours. This course provides practical experience in professional journalism through internships at area newspapers, broadcasting stations or public relations departments of area institutions and agencies. A faculty member and representative of the employing agency coordinate and evaluate the student's work. 1 class hour and 6 practicum hours per week. Prerequisite: EN5102 Journalism II and recommendation of faculty teaching courses in the Journalism/Broadcasting Option.

EN5104 COPY EDITING

A 1-semester course; 3 credit hours. Students will learn the principles and practice of news editing, including the following topics: copy editing, headline and cutline writing, wire copy editing, and page makeup. An intensive review of English grammar and usage is included. This course is recommended for third semester students with a strong interest in print journalism. Prerequisite: Permission of the instructor. 3 class hours per week.

EN5333 BROADCAST REPORTING & ANNOUNCING

A 1-semester course; 3 credit hours. The student will learn through the study of current radio and television practices how to edit and write news items for the radio and TV news media; how to broadcast these items on radio and TV; how to use basic equipment associated with radio and TV news gathering and production; and how to evaluate current broadcasting practices. Students are encouraged, though not required, to have access to a portable tape recorder and stop watch. 3 class hours per week.

EN5334 TELEVISION PRODUCTION I

A 1-semester course; 3 credit hours. The student will learn through the study of current television practices: how to write for, edit, produce and direct various complete television programs in a non-dramatic format; how to operate the equipment in the TV studio and control centers; and how to evaluate television content. While the emphasis will be on the TV news program in which the student will learn how to work as an assignment editor and anchor person, the student will also learn the basic techniques of the extended interview, the panel show and the documentary. 2 lecture hours and 2 lab hours per week. Limited to 18 students. **Prerequisite:** EN5333 Broadcast Reporting and Announcing and permission of the instructor.

EN8011 PUBLIC SPEAKING

A 1-semester course; 3 credit hours. The course is designed to familiarize students with rhetorical theory, critical thinking and the effective construction and delivery of various types of speeches. The course will concentrate on informative, persuasive and impromptu speeches, with other types included at the instructor's discretion. 3 class hours per week.

EN8020 INTERPERSONAL COMMUNICATION

A 1-semester course; 3 credit hours. Designed to help students understand the theory and develop the skills necessary for effective communication, the course explores communication axioms, verbal and nonverbal messages, message reception and sending, interpersonal listening and feedback, E-prime language, nondirective responding, paraphrasing, describing feelings, behaving assertively, managing conflict and facilitating consensus in small groups. 3 class hours per week.

EN8401 CHILDREN'S LITERATURE

A 1-semester course; 3 credit hours. A survey of 19th and 20th century children's literature, this course will examine the criteria of good literature, children's interests and developmental stages related to books, various genres of children's literature, children's book awards, illustrators and authors, and reference sources. 3 class hours per week.

EN8801 THE BIBLE AS LITERATURE

A 1-semester course; 3 credit hours. This course emphasizes the literary content, qualities and techniques of the Hebrew and Greek scriptures in English translation. 3 class hours per week.

EN8851 AMERICAN LITERATURE I

A 1-semester course; 3 credit hours. This course will present a study of the works of selected American writers from the beginnings to the Civil War and will include a study of the works' historical and literary settings. 3 class hours per week.

EN8852 AMERICAN LITERATURE II

A 1-semester course; 3 credit hours. This course will present a study of the works of selected American writers from the Civil War to the present and will include a study of their historical and literary settings. 3 class hours per week.

EN8853 BRITISH LITERATURE I

A 1-semester course; 3 credit hours. This course will present a study of selected British authors with emphasis on the period from the Middle Ages to the 18th century and will include a study of their historical and literary settings. 3 class hours per week.

EN8854 BRITISH LITERATURE II

A 1-semester course; 3 credit hours. This course will present a study of the works of selected British authors with emphasis on the era from the Romantic period to the present and will include a study of their historical and literary settings. 3 class hours per week.

EN8856 LITERATURE: MAJOR WRITERS

A 1-semester course; 3 credit hours. This course examines the principal works of one or two major writers of Classical, European, British, American, Latin American, Asian or African literature. The author or authors will differ each semester. 3 class hours per week.

EN8861 WESTERN LITERATURE I

A 1-semester course; 3 credit hours. This course will present a study of selected major works of the Ancient World-Greek, Roman and Hebrew - to the early medieval period, with attention to their historical and literary settings. 3 class hours per week.

EN8862 WESTERN LITERATURE II

A 1-semester course; 3 credit hours. This course will present a study of selected major works of Europe and Latin America from the medieval period to the present (excluding works originally in English) with attention to their historical and literary settings. 3 class hours per week.

EN8864 LITERATURE: SHAKESPEARE

A 1-semester course; 3 credit hours. Selected plays by Shakespeare and critical essays will be analyzed to understand each play's internal workings. This course cultivates students' abilities to read the plays comfortably, to follow and enjoy a performance, and to write about the plays with understanding. 3 class hours per week.

EN8865 AFRICAN AMERICAN LITERATURE

A 1-semester course; 3 credit hours. A selection of fiction, nonfiction, poetry, and drama by African Americans, this course will present topics that will vary from semester to semester, but may include leadership and slavery, the urban and rural experience, institutions such as the church and the law. African American music and film may be included. 3 class hours per week.

EN8867 MYTHOLOGY & LITERATURE

A 1-semester course; 3 credit hours. Using texts ranging from the Bible and Homer's epics to contemporary literary works, the course introduces mythological approaches to such subjects as heroism, place, time, family, and human nature. 3 class hours per week.

EN8882 LITERATURE: WOMEN'S LIVES-RECORDED & IMAGINED

A 1-semester course; 3 credit hours. Presenting women's lives, primarily in women's words, through biography, autobiography, journals, letters, and fiction, this course includes as written materials permit, women from all walks of life — famous, infamous and previously unknown—exploring both historic and imaginative limits and possibilities for women. Students will develop critical perspectives on uses of literary sources and will apply what they learn to contemporary women's lives. 3 class hours per week.

EN8883 WOMEN & LOVE IN LITERATURE

A 1-semester course; 3 credit hours. Through works primarily by women in several genres from a variety of times and places, this course will explore multiple definitions of love and examine love's role, as presented in literature, in women's lives and relationships. 3 class hours per week.

EN8884 LITERATURE: WOMEN IN FILM

A 1-semester course; 3 credit hours. This course presents the multiple views of women as seen through the cinema, with examples from literature as well. The student will meet varied attitudes toward self, beauty, socialization, exploitation and destiny of 20th century women. 2 class hours and 2 lab hours per week.

EN8885 LITERATURE: THE ART OF THE MOVIES

A 1-semester course; 3 credit hours. This course will attempt to foster critical taste in film. Students will explore the role of film in contemporary society by viewing and discussing documentaries, experimental films, impressionistic films, animated films and commercial films. Discussion and analysis will acquaint the student with the interrelationship of film technique and content. 2 class hours and 2 lab hours per week.

EN8891 LITERATURE: POETRY

A 1-semester course; 3 credit hours. This course stresses close critical reading and discussion of selected poems, with emphasis on the poems of the 20th century. There will be a consideration of the standard topics of poetry, such as, but not limited to, imagery, rhythm, structure, and purpose. 3 class hours per week.

EN8894 LITERATURE: THE SHORT STORY

A 1-semester course; 3 credit hours. This course stresses close critical reading and discussion of selected short stories written by 19th and 20th century authors from around the world, with special emphasis on works by American writers. 3 class hours per week.

EN8895 LITERATURE: THE NOVEL

A 1-semester course; 3 credit hours. This course is a study of the various forms and possibilities of the novel. Students will consider the concept of this genre. Readings, novels, as well as critical and historical essays, will differ each semester. 3 class hours per week.

FINANCE

FI3600 BUSINESS SPREADSHEET APPLICATIONS

A 1-semester course; 3 credit hours. Students will learn data entry procedures and will learn to solve a series of realistic marketing, finance, accounting and production problems using spreadsheet software. 2 class hours and 2 lab hours per week.

FI3652 BUSINESS FINANCE

A 1-semester course; 3 credit hours. Principles and practices of business finance. The short and long term sources of funds, management of financial assets, capital requirements, alternative forms of financing and the capital market. Some use of case study method. 3 class hours per week. **Prerequisite:** AC6611

FI3653 PERSONAL FINANCE

A 1-semester course; 3 credit hours. The course includes basics of personal financial planning for different objectives, based upon the risk tolerance and financial position of the individual investor. Portfolio planning for retirement and use of a personal finance software package will be among topics covered. Course also includes budgeting, major purchases, asset protection, and estate planning. 3 class hours per week.

FI3655 PLANNING & FINANCE FOR ENTREPRENEURS

A 1-semester course; 3 credit hours. Students in this course will learn to develop a business and sell the plan to an investor. Case studies and discussion topics include business plans, start ups, valuation techniques, franchising, company purchasing techniques, finance planning, pro forma development and evaluation. Students will be divided up into teams of three to five and will be required to meet outside of regular class hours. 3 class hours per week. **Prerequisite:** A grade of C or better in BU4450 Introduction to Entrepreneurship.

FINE ARTS

FA7012 INTRODUCTION TO THE CREATIVE EXPERIENCE

A 1-semester course; 3 credit hours. Designed to introduce methods, materials and meaning of the arts to those who are involved in developmental programs—childhood to adulthood. It is the way to explore the world through nonverbal experiences which are personal to each one. Emphasis is placed on spontaneity, imagination, invention and flexibility of each student. 3 class hours per week.

FA7014 20TH CENTURY ART/MUSIC

A 1-semester course; 3 credit hours. This course charts the history and development of western classical music and the visual arts through the last half of the 19th and the 20th centuries. By listening to music, looking at art, and learning about the composers and artists, the student will gain an appreciation of the art and music of their own time. Taught in distance learning format. 3 class hours per week.

FA7020 INTRODUCTION TO THE CREATIVE ARTS

A 1-semester course; 3 credit hours. An interdisciplinary approach to the arts with emphasis on both the experience of the arts and theory. The course is designed to give students an overview of all the arts by emphasizing the actual experience of dance, theatre, art and music. It is intended to give the student a strong sense of the enjoyment, excitement and pleasure that the arts can provide. 3 class hours per week.

FA7030 DRAWING I

A 1-semester course; 3 credit hours. This course is an introduction to the problems, techniques, and materials of drawing. Each class project will focus on a different aspect of visual perception, composition, and artists' materials. 2 class hours and 2 lab hours per week.

FA7031 DRAWING II

A 1-semester course; 3 credit hours. This course is a continuation of the problems, techniques and materials introduced in Drawing I. Students will continue exploring a variety of drawing materials. Emphasis, however, will be placed on understanding the problems inherent in translating what one sees in three dimensions to what one creates on the two dimensional surface. 2 class hours and 2 lab hours per week. **Prerequisite:** Drawing I.

FA7040 PAINTING I

A 1-semester course; 3 credit hours. This course is an introduction to the problems, techniques and materials of Painting. Each class project will focus on a different aspect of visual perception, composition and artists materials. 2 class hours and 2 lab hours per week

FA7041 PAINTING II

A 1-semester course; 3 credit hours. This course is a continuation of Painting I. The emphasis will be on giving more complexity and subtlety to both the color and the composition in each project. The student will be encouraged to find personal solutions to the general problems presented. 2 class hours and 2 lab hours per week. **Prerequisite:** Painting I.

FA7045 FIGURE DRAWING

A 1-semester course; 3 credit hours. This course offers the student the opportunity to draw from a live model. Class sessions will explore different approaches to figure drawing, covering a variety of techniques and concepts (gesture drawing, contour line drawing, form, light and shade, movement, etc.). Students will be encouraged to experiment with a variety of materials, and to enlarge the scale of their work as the semester progresses. 2 class hours and 2 lab hours per week. **Prerequisite:** FA7030 Drawing I.

FA7051 INTRODUCTORY PHOTOGRAPHY

A 1-semester course; 3 credit hours. A foundation course that covers basic camera operation, darkroom techniques, exposure, composition and aesthetics, and the use of color. Students will learn to develop and print their own black and white photographs in a laboratory setting. An adjustable 35mm camera is required. Students are expected to complete lab work. 3 class hours per week.

FA7053 ADVANCED PHOTOGRAPHY

A 1-semester course; 3 credit hours. Advanced techniques in camera operation, black and white process', composition, and the use of color. Emphasis is on photographic self-expression and communications. Students are expected to complete lab work as required. 3 class hours per week. **Prerequisite:** FA7051 Introductory Photography or permission of the instructor.

FA7055 NEWS PHOTOGRAPHY

A 1-semester course; 1 credit hour. A course on the practical application of photojournalism. Concentration is on providing eye catching photographs for newspapers, magazines, newsletters and other print media. Participants will regularly take and print pictures on assignment for the campus newspaper *The Observer*. Students will meet with instructor once a week to receive photo assignments and critique previous assignments. 1 class hour per week. **Prerequisite:** Introduction to Photography (may be taken concurrently) or permission of the instructor.

FA7080 COLOR & DESIGN

A 1-semester course; 3 credit hours. This foundation course will look at color through its physical properties as well as its expressive functions. The class will explore the properties of value, hue and intensity. The student will deal with problems in manipulating color as well as mixing it. Concern will be for the process of taking a color concept from idea to finished form. There will be emphasis on clarity of concept through quality of craftsmanship. 2 class hours and 2 lab hours per week.

FA7089 DANCE PEDAGOGY

A 1-semester course; 3 credit hours. This is a course for prospective teachers of dance or for those preparing for a second career. Topics of study will include dance theory, prevention of dance injuries, and teaching methods for a wide variety of levels. An additional minimum of 12 hours of teaching on or off campus, will be required. 3 class hours per week. **Prerequisite:** FA7091 Dance in Performance and permission of the instructor.

FA7090 DANCE REPERTORY

A 1-semester course; 3 credit hours. A rehearsal format along with work on technique, this course will encompass traditional, modern, jazz and ballet repertoire and require participation in two performances. 4 class hours per week. **Prerequisite:** Dance in Performance and permission of the instructor.

FA7091 DANCE IN PERFORMANCE

A 1-semester course; 3 credit hours. The course will include a review of the basic techniques of Modern Dance, advance to more involved training in technique, movement and improvisation, and focus on the principle of dance production. Students will be introduced to production areas such as choreography, programming, costuming, lighting, public relations, audiovisual, special effects and budget, and they will participate in the final performance of the semester, Still Point, given for the community. 3 class hours per week.

FA7094 DANCE COMPOSITION

A 1-semester course; 3 credit hours. The course is designed to provide students with a broad perspective on movement, choreography and composition, through the study of dance history and various choreographic techniques. Students will have the opportunity to create and perform their individual works in a student performance to be given at the end of the semester. 3 class hours per week.

FA7096 GRAPHIC DESIGN I

A 1-semester course; 3 credit hours. This introductory course will develop an understanding of basic design principles, including space, line, form and color and the use of letterforms and design contrasts to convey a visual message. Design projects will be done with various design media while exploring the importance of working in stages from rough idea to finished design work. 2 class hours and 2 lab hours per week.

FA7097 GRAPHIC DESIGN II

A 1-semester course; 3 credit hours. The course will build upon the design principles introduced in Graphic Design I. Students will learn elements of clear and effective communication using type and image through traditional and computer media. The class will focus on visual representation of literal, metaphorical, symbolic and/or abstract ideas. Students will complete simulated commercial projects. 2 class hours and 2 lab hours per week. **Prerequisites:** FA7096 Graphic Design I and FA7121 Macintosh Design/or permission of instructor.

FA7121 MACINTOSH DESIGN

A 1-semester course; 3 credit hours. An introduction to computer graphics and desktop publishing emphasizing type and computer illustration using the Macintosh computer. Content will include hands on practice with drawing and paint program (Freehand) and a word processing program (Microsoft Word). Hardware products discussed as needed. Word processing and/or graphic design background helpful but not required. 2 class hours and 2 lab hours per week.

FA7122 PUBLICATION DESIGN

A 1-semester course; 3 credit hours. This course explores typography, page ingredients and creative visual communication while learning to create publications with QuarkXPress for the Macintosh computer. 2 class hours and 2 lab hours per week.

Prerequisite: FA7121 Macintosh Design.

FA7123 PUBLICATION DESIGN II

A 1-semester course; 3 credit hours. A computer graphics course using advanced page design, style and layout skills. Students will create publications with Pagemaker software on the Macintosh computer. Emphasis will be on developing promotional materials with pictures and creative images; doing color separation, page layouts with original and/or scanned art; advertising design. 2 class hours and 2 lab hours per week. **Prerequisite:** FA7122 Publication Design.

**FA7126 ADVANCED PUBLICATION DESIGN
(QUARKXPRESS)**

A 1-semester course; 3 credit hours. This course will provide advanced skills in publication design, computer illustration and the printing process. Students will demonstrate their competence through design projects using an advanced layout program QuarkXPress and an advanced drawing program Freehand. 2 class hours and 2 lab hours per week. **Prerequisite:** FA7122 Publication Design.

FA7130 ANIMATION

A 1-semester course; 3 credit hours. Emphasis will be on introducing students to computer animation, with specific projects to be done on the Macintosh computer. The main focus will be on mastering the tools and terms used in computer animation in order to design, illustrate and final edit animation clips. 2 class hours and 2 lab hours per week. **Prerequisite:** FA7121 Macintosh Design.

FA7210 PORTFOLIO FOR ILLUSTRATION

A 1-semester course; 1 credit hour. Focus is on developing a portfolio for purposes of further study or professional marketing. The student will develop an appropriate portfolio for illustration by working on assigned projects, selecting and presenting work, developing appropriate associated materials (e.g. resume, card, stationery, tear sheets or printed pieces.) 1 class hour per week.

FA7211 PORTFOLIO FOR GRAPHIC DESIGN

A 1-semester course; 1 credit hour. Focus is on developing a portfolio for purposes of further study or professional marketing. The student will develop an appropriate portfolio for graphic design by working on assigned projects, selecting and presenting work, developing appropriate associated materials (e.g. resume, card, stationery, tear sheets or printed pieces.) 1 class hour per week.

FA7212 PORTFOLIO FOR PHOTOGRAPHY

A 1-semester course; 1 credit hour. Focus is on developing a portfolio for purposes of further study or professional marketing. The student will develop an appropriate portfolio for photography by working on assigned projects, selecting and presenting work, developing appropriate associated materials. 1 class hour per week.

FA7290 DANCE REPERTORY II

A 1-semester course; 3 credit hours. A rehearsal format along with advanced work on technique, this course will encompass modern and jazz repertoire and require participation in four performances. The course will also include a dance history component and a thesis paper on dance performance or dance history. Students will devote 2 class hours a week to advanced technique as well as dance history and a minimum of 2 lab hours per week to learn and execute more advanced choreography. **Prerequisite:** FA7090 Dance Repertory.

FA9001 ILLUSTRATION I

A 1-semester course; 3 credit hours. The aim of the course is to give exposure to a variety of media used in commercial illustration, as well as to the different types of illustration including book, newspaper and current event. Developing drawing skills will be an integral part of the course. The history of illustration will be presented in order to understand it as communication from concept to finished product. 2 class hours and 2 lab hours per week. **Prerequisite:** FA7030 Drawing I or permission of instructor.

FA9002 ILLUSTRATION II

A 1-semester course; 3 credit hours. Illustration II will give students an opportunity to build on the conceptual and technical strategies of pictorial communication introduced in Illustration I. It will offer possibilities for refining graphic and aesthetic abilities, developing personal style, and applying those skills toward assignments with actual or simulated commercial applications. Students will be encouraged to start a professional portfolio and will be offered exposure to the business, as well as the art, of illustration. 2 lecture hours and 2 lab hours per week. **Prerequisite:** Illustration I.

FA9005 COMPUTER ILLUSTRATION

A 1-semester course; 3 credit hours. Emphasis will be on introducing students to computer illustration with specific projects to be done on the Macintosh computer. The main focus will be on using Adobe Illustrator and other draw and paint software to create original computer generated illustrations. Graphic and aesthetic fundamentals will be addressed; an emphasis of the course will be the connection of other commercial art courses to Computer Illustration. 2 class hours and 2 lecture hours per week. **Prerequisite:** FA7030 Drawing I; FA7121 Macintosh Design.

FRENCH

FR4401/FR4402 INTRODUCTORY FRENCH I & II

A 2-semester course; 3 credit hours per semester. For students who have not completed two years of secondary school French or the equivalent as determined by the department. An introduction to the basic grammatical patterns of French. Speaking, reading and writing in the French language. 3 class hours per week.

FR4451/FR4452 INTERMEDIATE FRENCH I & II

A 2-semester course; 3 credit hours per semester. For students who have completed two or more years of secondary school French or the equivalent as determined by the department, or who completed FR4401 and FR4402 successfully. A continued study of FR4401 and FR4402 language skills, emphasizing the development of reading ability. 3 class hours per week.

GEOGRAPHY

GE9511 INTRODUCTION TO GEOGRAPHY

A 1-semester course; 3 credit hours. A survey of the earth's political, social, cultural, and economic patterns and their relationship to the earth's physical features. The course will stress the location of nations and cities, rivers and seas, and it will examine the history and current political situation of each major area of the world. It will also discuss the exploitation of earth's resources with a view toward maintenance and restoration. 3 class hours per week.

GERMAN

GM4401/GM4402 INTRODUCTORY GERMAN I & II

A 2-semester course; 3 credit hours per semester. An adventure in German culture and communication. For students who have not completed two years of secondary school German or the equivalent as determined by the department. Audio-lingual emphasis. Introduction to grammatical patterns, speaking, reading and writing. 3 class hours per week.

GOVERNMENT

Note: Credit toward graduation will not be awarded for more than two of the following: Federal Government, State and Local Government, American Government and Politics.

GV3300 INTRODUCTION TO LAW

A 1-semester course; 3 credit hours. A survey of the structure, functions and development of the legal and judicial process with emphasis on legal concepts, terminology and case analysis. Attention will be given to historical background for Anglo/American practices. 3 class hours per week.

GV3301 U. S. CONSTITUTIONAL LAW

A 1-semester course; 3 credit hours. Constitutional law is a formal body of rules which consist primarily of decisions and opinions of the U.S. Supreme Court. It is the study of factual background, historical and contemporary, of major Supreme Court cases to gain an analytical framework by which to understand the standards and tests applied by the Court in reaching decisions. Emphasis on U.S. Governmental structure and relationships including relationships with state and local governments. 3 class hours per week. **Prerequisite:** Any previous course with a GV prefix passed with a grade of C- or better or permission of the instructor.

GV3310 AMERICAN GOVERNMENT & POLITICS

A 1-semester course; 3 credit hours. Survey of the structure and operations of the federal government as well as state governments. The course will include the relationship of the three branches of the federal government to each other and to state governments. U.S. and state constitutions and their interpretations will be discussed. Emphasis is given to American political traditions, parties, processes and a range of governmental policies. **Note:** This course is designed to meet the requirements of state law for students who intend to transfer to Massachusetts state colleges. 3 class hours per week.

GV3312 INTRODUCTION TO POLITICAL SCIENCE

A 1-semester course; 3 credit hours. Descriptive survey of the general principles of politics. Emphasis is given to the development of politics in society, the major political traditions and ideologies, and comparative governmental systems including institutions, political organization and behavior, and a select range of government policies. 3 class hours per week.

GV3315 CIVIL RIGHTS & LIBERTIES

A 1-semester course; 3 credit hours. Deals with the role of individual rights and liberties in American society within the framework of the U.S. Constitution. The paradox of freedom is essentially the core around which lectures, discussion and research will be conducted. It is advisable to take this course after having completed a course in federal government. 3 class hours per week. **Prerequisite:** Any previous course with a GV prefix passed with a grade of C- or better or permission of the instructor.

GV3320 WOMEN & THE LAW

A 1-semester course; 3 credit hours. Designed to introduce students to various areas of law that affect a woman's life. It will include such topics as an historical overview of women's legal rights in the U.S., employment rights and benefits, education, criminal law, marriage and divorce and reproductive issues as well as other constitutional issues specifically pertinent to women. Students will each explore one area in depth. This is an introductory course that does not presuppose prior study of law. 3 class hours per week.

HEALTH INFORMATION TECHNOLOGY

MR6601 INTRODUCTION TO HEALTH INFORMATION PRACTICES & PROCEDURES

A 1-semester course; 3 credit hours. The beginning of a series of courses designed to instruct students in the theory and principles of Health Information Technology. Subjects covered are orientation to medical record field, admitting areas, medical record forms and content, medical record formats (e.g., problem-oriented medical record), numbering and filing systems, record retention procedures, storage and retrieval systems, medical staff organization and by-laws. 3 class hours per week.

MR6602 HEALTH INFORMATION – LEGAL ASPECTS

A 1-semester course; 3 credit hours. Course includes the study of principles of law as related to patient care and medical records, state and federal legislation regulating health care facilities or the delivery of health care services and the role of healthcare accrediting agencies. Medicare, Medicaid, P.R.O. and other health related legislative programs will be covered. 3 class hours per week.

Prerequisite: MR6601.

MR6605 INTRODUCTION TO MEDICAL LANGUAGE I

A 1-semester course; 3 credit hours. A study of basic prefixes, suffixes, roots, abbreviations, symptomatic, disease, operative, and drug terminology. Terms will be taught by anatomical system with lectures on the anatomy of the system included. The following systems are covered: integumentary, musculo-skeletal, cardiovascular, blood and blood forming organs. 3 class hours per week.

MR6606 INTRODUCTION TO MEDICAL LANGUAGE II

A 1-semester course; 3 credit hours. A study of prefixes, suffixes, roots, abbreviations, symptomatic, disease, and operative terminology of the following systems are covered: digestive, respiratory, neurological, urogenital, maternal and antenatal, endocrine, organs of special sense, and systemic diseases. Also selected laboratory terms and selected medical terms relating to psychiatry are covered. 3 class hours per week. **Prerequisite:** MR6605 Introduction to Medical Language I.

MR6620 DIRECTED PRACTICE I (MEDICAL RECORD)

A 1-semester course; 4 credit hours. Supervised practice in the medical record department of a community hospital affiliated with the Health Information Technology Program. Students participate in specific phases of medical record systems and become acquainted with the required medical record procedures of a local hospital. Several reports prepared by students relating to the experience are required. 16 hours per week. 2 hospital working days per week (own transportation necessary). **Prerequisite:** MR6606, MR6602 concurrently. Malpractice insurance necessary.

MR6622 DIRECTED PRACTICE II (MEDICAL RECORD)

A 1-semester course; 4 credit hours. Supervised practice in health information systems in extended care facilities, psychiatric facilities, ambulatory care facilities and in related health care settings. When appropriate, field trips will be arranged in order to reinforce and demonstrate medical record systems in alternative health care settings. **Note:** Students must provide their own transportation. 2 days per week. **Prerequisite:** MR6651, MR6620. Malpractice insurance necessary.

MR6629 MEDICAL RECORD CODING & CLASSIFICATION

A 1-semester course; 3 credit hours. Topics covered include history, format and conventions of the International Classification of Diseases. It will cover basic coding principles which allow clinical statements to be translated into code numbers. Included will be brief coverage of other coding systems that may be required or mandated in order for a facility to receive maximum reimbursement (e.g., HCPCS/CPT which is a system required for Medicare billing of physician's and other selected clinical services and for Medicare outpatient hospital services billing). 3 class hours per week. **Prerequisite:** BI5520, MR6606; BI5530 concurrently.

MR6630 CODING & CLASSIFICATION PRACTICUM

A 45-hour practicum; 1 credit hour. The student will apply the principles of coding learned in the classroom under direct supervision of a coder/analyst at the affiliating health care facility. The coding systems applied will be ICD-9-CM and CPT 4. **Prerequisites:** MR6629 Medical Record Coding & Classification Systems.

MR6651 HEALTHCARE DATA COLLECTION & ANALYSIS

A 1-semester course; 3 credit hours. Study of basic principles of compiling statistics for hospitals and other medical facilities. Topics include the daily census; analysis of hospital services; monthly, annual and special reports; methods of recording vital statistics; definitions and formulas, data abstracting systems, data entry and retrieval. Topics covered also include record systems in alternative health care settings (e.g., doctor's office, long term care, psychiatric, rehabilitation, HMO, ambulatory care and home health agencies). 3 class hours per week. **Prerequisite:** MR6602 and MR6620.

MR6655 QUALITY IMPROVEMENT & MANAGEMENT TECHNIQUES

A 1-semester course; 3 credit hours. Topics covered include quality improvement concepts and methodologies as they relate to the medical record keeping function. A study of the prospective payment system including DRG's, casemix and PRO is integrated with management of a medical record department. Management aspects covered include management of the transcription area, casemix management, quality improvement, utilization review, and risk management. 3 class hours per week. **Prerequisite:** MR6651

MR6661 MEDICAL RECORD TRANSCRIPTION I

A 1-semester course; 3 credit hours. Introduction to the role of the transcriptionist in health record services. It covers the operation of a computer and transcribing equipment; techniques of transcription; and transcribing of sample medical communications, such as basic history and physical examination, reports of specialty departments (e.g., x-ray, pathology, EKG's, etc.). Also covered, the typing of various medical forms, admission records, group hospital insurance forms, doctor's service reports, patient transfer forms, etc.; the use of medical references with cross referencing; the proper spelling and punctuation of both common and medical terms. Quality of transcription emphasized rather than quantity. 4 class hours per week. **Prerequisite:** MR6605, keyboarding skills of 45 wpm with 5 errors or less.

MR6662 MEDICAL RECORD TRANSCRIPTION II

A 1-semester course; 3 credit hours. Development of medical transcription at a productive speed with accuracy. Units of history and physical examinations, surgical reports, and discharge summaries covering the areas of cardiology, obstetrics-gynecology, orthopedics, respiratory, gastroenterology, plastic surgery, urology, neurology, psychiatry, otorhinolaryngology, ophthalmology, and endocrinology-oncology. Rate of production is measured. Also medical timed writings and a review of English grammar, usage and style given. 4 class hours per week. **Prerequisite:** MR6661.

MR7701 CODING & CLASSIFICATION FOR MEDICAL BILLING

A 1-semester course; 3 credit hours. Designed to familiarize students with basic coding principles. Topics include format and conventions of ICD9-CM and HCPCS/CPT. These coding systems allow clinical statements to be translated into code numbers that are linked to reimbursement, and facilitate processing claims in accordance with payer requirements. 3 class hours per week.
Prerequisite: MR6605 Introduction to Medical Language I.
Corequisite: MR6606 Introduction to Medical Language II.

MR7702 MEDICAL BILLING ADMINISTRATION

A 1-semester course; 3 credit hours. Designed to teach skills in the management of patient medical accounts using standard healthcare third party billing methodologies. Topics include insurance claim life cycle, analysis of common medical programs such as Blue Cross, Medicare, Medicaid, HMO's etc., billing forms, recording account transactions, legal issues, and handling patient inquiries. A standard medical billing software tool will be used in completing the practical application requirements of the course. **Co-requisite:** MR7701 Coding & Classification for Medical Billing.

MR7703 MEDICAL BILLING INTERNSHIP

A 150 contact hour internship; 3 credit hours. The student will apply the billing, coding and patient account management principles learned in the classroom, under direct supervision of a third party billing professional in a health care facility and/or physicians office. The coding systems applied will be ICD-9-CM and CPT-4 and billing for a variety of third party payers. **Prerequisites:** MR7701 Coding & Classification for Medical Billing and MR7702 Medical Billing Administration.

NOTE: Students must provide own transportation. Malpractice insurance is necessary.

HEALTH SERVICES

HS1010 MEDICAL TERMINOLOGY I

A 1-semester course; 1 credit hour. Basic prefixes, suffixes, roots, abbreviations, symptomatic, disease, operative and drug terminology. Terms will be taught by anatomical system with lectures on the anatomy of the system covered (the basics). The following systems are covered: integumentary, cardiovascular, urogenital, lymphatic, immune, blood and blood forming organs. 1 class hour per week.

HS1011 MEDICAL TERMINOLOGY II

A 1-semester course; 1 credit hour. A study of the language of medicine including the following topics: Prefixes, suffixes, roots, abbreviations, symptomatic, disease and operative terminology of the following systems: Digestive, neurological, maternal and antenatal, organs of special sense (eyes and ears), respiratory, diagnostic and imaging, endocrine, pharmacy, musculoskeletal. In addition, selected laboratory terms and terms related to medical specialties like psychiatry, oncology, etc. 1 class hour per week.
Prerequisite: HS1010 Medical Terminology I.

HS6651 INTRODUCTION TO HEALTH SERVICES

A 1-semester course; 3 credit hours. A survey course to provide the student with a comprehensive overview of the health care delivery system and its integration within the community. Some of the topics to be covered are orientation to health professions, organizational patterns of health care, financing of health care, state and federal legislation and medicolegal issues. Field trips and guest lecturers may be utilized. 3 class hours per week.

HS6710 EMERGENCY MEDICAL TECHNICIAN

A 1-semester course; 7 credit hours. Specialized training for employees or volunteer members of public or private organizations having a responsibility for delivery of emergency care. Training areas covered will be respiration and resuscitation; medical and environmental emergencies, including unscheduled childbirth; injuries to the skull, brain, neck and spine; and bleeding, wounds and shock; auto defibrillation; pharmacology, Kendrick Extrication Device (K.E.D.). Students must pass this course in order to be eligible to take the State Registry Exam for Emergency Medical Technicians. Meets U.S. Department of Transportation 1994 guidelines. 6 class hours per week.

HISTORY

Note: A sequence of Western Civilization I & II or World Civilization I & II recommended. Transfer institutions should be consulted by the student as to their respective preferences. However, in no case will students be given credit for both Western Civilization I and World Civilization I or both Western Civilization II and World Civilization II.

HI9900 THE CONTEMPORARY WORLD

A 1-semester course; 3 credit hours. Survey of important political, social, economic and cultural developments in the world since 1945. Emphasis will be placed on the nuclear arms race, the Cold War, upheaval and transformation in the Third World and the rearrangement of the world balance of political and economic power. 3 class hours per week.

HI9901 WESTERN CIVILIZATION I

A 1-semester course; 3 credit hours. Survey of major historical developments and trends in Western Civilization from their origins to 1715 with emphasis on the formation and evolution of the social, political, economic, religious and cultural institutions of ancient medieval and early modern Europe. 3 class hours per week.

HI9902 WESTERN CIVILIZATION II

A 1-semester course; 3 credit hours. Survey of major historical developments and trends in Western Civilization from 1715 to the present with emphasis on the evolution of social, political, economic, religious and cultural institutions in modern Europe. 3 class hours per week.

HI9903 EARLY CIVILIZATION

A 1-semester course; 3 credit hours. Survey of major historical developments and trends in the rise of the West from their origins in the ancient Near East through Classical Greece and Rome to the decline and fall of the Roman Empire and the rise and triumph of Christianity. Attention is given to the formation and evolution of social, political, and economic institutions as well as intellectual, religious and cultural achievements. 3 class hours per week.

HI9904 WORLD CIVILIZATION I

A 1-semester course; 3 credit hours. Survey of major world civilizations from their origins to 1500 stressing and interpreting social, cultural, intellectual, religious, economic and political developments of European, African, Asian and Amerindian societies and their contributions to humankind. 3 class hours per week.

HI9905 WORLD CIVILIZATION II

A 1-semester course; 3 credit hours. Survey of major world civilizations from 1500 to the present, stressing social, cultural, intellectual, religious, economic and political developments of European, African, Asian, and Amerindian societies, their interaction, and their contributions to humankind. 3 class hours per week.

HI9910 THE U.S. CIVIL WAR:**AMERICA'S IRREPRESSIBLE CONFLICT**

A 1-semester course; 3 credit hours. An in-depth study of the War Between the States. The course centers on the military activity of the war: strategies, campaigns, leadership and the lives of black and white soldiers from the north and south. Both northern and southern perspectives of the causes and meaning of the war are covered. In addition, significant attention is paid to activity behind the scenes: the roles played by women and men on both home fronts, the political struggle for leadership within the central government and the response to the war by artists in music, art, literature and photography. 3 class hours per week.

HI9913 U.S. HISTORY I

A 1-semester course; 3 credit hours. Survey of U.S. history from colonial times through the Civil War. Traces the development of political, social, cultural and economic institutions. 3 class hours per week.

HI9914 U.S. HISTORY II

A 1-semester course; 3 credit hours. Survey of U.S. history from reconstruction to the present. Examines political, social, cultural and economic institutions of the U.S. Focuses on the extension of those institutions through imperialism and the challenges to them by the depression and two world wars. 3 class hours per week.

HI9916 RECENT U.S. HISTORY

A 1-semester course; 3 credit hours. Seminar on American history since World War II. Directed readings and emphasis on the major areas of recent national concern such as the welfare state, foreign affairs, changes in American society, the urban crisis in the postwar years, etc. In addition, projects, the intent of which is to depict some perspectives on contemporary America, are assigned. 3 class hours per week.

HI9917 THE FAMILY IN HISTORY

A 1-semester course; 3 credit hours. Analysis of the changes in the structure and functions of the family in Western Europe and America from the 16th century to the present. Special emphasis will be placed upon the impact of industrialization and modernization upon the family and its individual members. 3 class hours per week.

HI9953 MODERN CHINA & JAPAN

A 1-semester course; 3 credit hours. Survey of Chinese and Japanese history and related areas from around 1800 to the present. This course will begin by exploring the nature of traditional China and Japan on the eve of confrontation with the West, their contrasting responses to Western power and ideas and their attempts at reconciling traditional and modern ideas and institutions; it will then proceed to examine the emergence of nationalism in China and Japan, the triumph of revolution in China and the establishment of the People's Republic and the growth of Japan into a modern industrial state. 3 class hours per week.

HI9955 MINORITY GROUPS IN AMERICA

A 1-semester course; 3 credit hours. Seminar on the contributions and difficulties of religious, racial, ethnic and other minority groups in the pluralistic American Society from colonial times to the present. Particular attention will be given to the following groups: Catholic and Jewish, Native Indian, African-American and Hispanic, southern European and Asian. Students will research, write and present individual reports. 3 class hours per week.

HI9956 AMERICAN FOREIGN POLICY

A 1-semester course; 3 credit hours. Survey of U.S. foreign affairs from revolutionary times to the present. Special emphasis on America's emergence as a world power and her relationship with Europe, Latin American and the Far East. Attention will be paid to the developing roles of the President and the State Department, Congress and international organizations in our foreign policy. 3 class hours per week.

HI9958 TWENTIETH CENTURY RUSSIA

A 1-semester course; 3 credit hours. This course will begin by looking at tsarist Russia in order to understand the background to the Communist takeover in 1917. The successes and failures of the Communist system will then be examined. Attention will be given to the collapse of Communism and subsequent breakup of the Soviet Union. The course will conclude with an examination of Russia and the other former Soviet Republics in the post-Communist era. 3 class hours per week.

HI9959 HISTORY OF LATIN AMERICA

A 1-semester course; 3 credit hours. Survey of the historical development of Latin America from the preconquest societies to the present time. Emphasis is placed on the contributions made by the Indian traditions, the European conquerors, and the fusion of these two elements in the years following independence. The relationship between the United States and Latin America will be given special attention. 3 class hours per week.

HI9960 THE MODERN MIDDLE EAST

A 1-semester course; 3 credit hours. Introductory survey of the social, political, intellectual, religious and economic forces that have shaped the contemporary Middle East. In addition to considering the Talmic and Ottoman backgrounds and influences common to most of the countries in the Middle East, each of the principal countries in this region will be examined separately. Special attention will be given to the problems resulting from the interaction of traditional indigenous elements and modern external forces among Arabs, Jews, Persians and Turks. 3 class hours per week.

HI9962 WOMEN'S HISTORY:

GIVING THE MAJORITY ITS PAST

A 1-semester course; 3 credit hours. Women's experience has always made up half the past, thus, their lives and concerns are as important in the study of history as those of men. Introducing students of both sexes to admirable people, male and female, is important, both for an understanding of what was possible and achieved in former times, and what one can become in today's world, drawing on that past heritage. This course examines those cultural assumptions by which a society measures the significance of all our lives. What do our instructional institutions (family, church, schools and media) teach us about individual values: what is expected of a little girl when she grows up and a little boy when he matures? Are these expectations realistic or biased? Does a double standard in income, morality and opportunity still exist? Women's history raises such questions and offers a challenge to teachers and students alike. The particular emphasis in period and culture will be determined by the instructor. 3 class hours per week.

HUMANITIES

HU4000 INTRODUCTION TO HUMANITIES

A 1-semester course; 3 credit hours. Through thematically selected works of literature, film, music, art, religion, and philosophy, this team-taught course focuses on the individual's concept of self (identity, purpose, goals, destiny) and the individual's relationship to community (ethics, values, justice) as explored in the traditional and nontraditional intellectual and artistic heritage of humanity. 3 class hours per week.

HUMAN SERVICES

MH2111 INTRODUCTION TO HUMAN SERVICES

A 1-semester course; 3 credit hours. An introduction to the history of human services; current trends in mental health and human services, developmental disabilities, and substance abuse. The focus will be on understanding the human service delivery system, communication techniques, legal/human rights, empowerment, prevention/intervention, learning the diagnostic process, the development of the treatment plan based on assessment, documentation, ethics/confidentiality, and the role of the human services practitioner. The National Community Support Skill Standards for human service practitioners are integrated into the course content. 3 class hours per week.

MH2133 OBSERVATION & RECORDING OF HUMAN SERVICES PROGRAMS

A 1-semester course; 1 credit hour. A preliminary investigation of programs in human services in varied community settings. This course is designed for students to visit selected agencies in the community and to participate in discussions with community professionals who provide human services. It is designed as an observational activity because the essence of learning about human services is to have the opportunity to feel the experience and have contact with people who are in need of services. Focus will be on community resources, networking, observation, and recording skills. The National Community Support Skill Standards for human service practitioners are integrated into the course content. Students will also begin to develop a resource directory in human services. 4 practicum hours per week. **Prerequisite:** Enrollment in the Human Services, Community Support Human Service Practitioner Program or Alcohol/Drug Abuse Counseling programs.

MH2134 HUMAN SERVICES PRACTICUM I

A 1-semester course; 4 credit hours. A practicum in selected community based human service programs, psychiatric hospitals, clinics, day treatment programs, workshops, social service agencies, and schools. Students have an educational experience of their own choice, and under professional supervision, that promotes personal and professional growth. Students provide direct support services using the skills of interpersonal communication, interviewing, observation, conflict resolution, problem solving, case management, intervention, and documentation. They practice a philosophy of human services that includes respecting the dignity of all individuals, recognizing individual differences, individual empowerment, confidentiality, and ethical practice. Classroom theory is integrated into the practicum experience where students demonstrate skills and competencies based on the National Community Support Skills Standards. 12 practicum hours and 1 class hour per week. **Prerequisite:** Enrollment in the Human Services program.

MH2143 HUMAN SERVICES PRACTICUM II

A 1-semester course; 4 credit hours. A continuation of Practicum I but with a greater involvement in direct support services. Classroom theory is integrated into the practicum experience where students demonstrate skills and competencies based on the National Community Support Skills Standards. 12 practicum hours and 1 class hour per week. **Prerequisite:** Enrollment in the Human Services program.

MH2144 HUMAN SERVICES PRACTICUM III

A 1-semester course; 4 credit hours. A continuation of Practicum II but with more intensive involvement in direct support services with increased understanding of the operation of the facility and opportunity for career development. Classroom theory is integrated into the practicum experience where students demonstrate skills and competencies based on the National Community Support Skill Standards. 12 practicum hours and 1 class hour per week. **Prerequisite:** Enrollment in the Human Services program.

MH2145 HUMAN SERVICES PRACTICUM I IN COMMUNITY SUPPORT SERVICES

A 1-semester course; 4 credit hours. A practicum in residential services (adult and children), independent support living programs, shelters, and day habilitation programs. Students have an educational experience of their own choice, and under professional supervision, that promotes personal and professional growth. Students provide direct support services to assist persons with emotional disability, mental illness, developmental disability, and substance abuse to improve their quality of life and integrate into the mainstream of society. Classroom theory is integrated into the practicum experience where students demonstrate skills and competencies based on the National Community Support Skill Standards. 1 class hour and 12 practicum hours per week. **Prerequisite:** Enrollment in the Community Support Human Service Practitioner Program.

MH2146 HUMAN SERVICES PRACTICUM II IN COMMUNITY SUPPORT SERVICES

A 1-semester course; 4 credit hours. A continuation of Practicum I but with a greater involvement in the delivery of direct support services with increased understanding of the operation of the program and opportunity for career development. Classroom theory is integrated into the practicum experience where students demonstrate skills and competencies based on the National Community Support Skill Standards. 1 class hour and 12 practicum hours per week. **Prerequisite:** Enrollment in the Community Support Human Service Practitioner program.

MH2147 GROUP DYNAMICS

A 1-semester course; 3 credit hours. Course aims to help students realize their potential for growth more fully and increase their ability to work effectively with others in a variety of situations. Students will learn how groups work and how individuals function within groups by forming a group for this purpose. Phases of group development, communication and group performance are experienced and discussed. Having an appreciation of group process will also enable students to support individuals to utilize self help and support groups offered in community services. 3 class hours per week. **Prerequisite:** Enrollment in the Human Services, Community Support Human Service Practitioner or Alcohol/Drug Abuse Counseling programs.

MH2155 MODALITIES OF TREATMENT

A 1-semester course; 3 credit hours. The focus of treatment modalities is an examination and exploration of the helping process, counseling approaches, and application of therapeutic techniques. Students will learn the theory and practice of various treatment models that include psychodynamic, behavioral, supportive, existential, and recent modalities. Values and attitudes related to the delivery of human services, ethical issues, and confidentiality are integrated into the course. A primary goal of this course is to provide future and/or present personnel in the field with essential information needed to provide appropriate services. 3 class hours per week. **Prerequisite:** Enrollment in the Human Services, Community Support Human Service Practitioner Program or Alcohol Drug Abuse Counseling programs.

MH2156 BEHAVIOR MANAGEMENT PRINCIPLES & TECHNIQUES

A 1-semester course; 3 credit hours. This course seeks to acquaint students with the application of principles of instruction learning theory to the problems of human behavior. Focus will be on approaches to an individual's behavior management problem and practical techniques for helping individuals to improve functioning in the community. Content will include the analysis of behavior, reinforcement of behavior, point or token system, shaping process, ethical issues and future trends in behavior management. 3 class hours per week. **Prerequisite:** Enrollment in the Human Services or Community Support Human Service Practitioner programs.

MH2166 SEMINAR IN HUMAN SERVICES

A 1-semester course; 3 credit hours. This seminar allows for group discussion of theoretical and practical approaches in the delivery of human services through guest presentations of expert practitioners in the field. The course provides a culminating learning experience to integrate the human service education received, job search, and consideration of long term career paths. A Human Service Professional Portfolio will be completed by all participants. Graduate identity as a human service practitioner is presented in this seminar. 3 class hours per week. **Prerequisite:** Enrollment in Human Services, Community Support Human Service Practitioner or Alcohol/ Drug Abuse Counseling programs.

MH2168 HUMAN SERVICES PRACTICUM I IN ALCOHOL/DRUG ABUSE SERVICES

A 1-semester course; 4 credit hours. A practicum in selected alcohol/drug abuse agencies, hospitals detoxification programs, clinics, residential programs, shelters, and dual diagnosis services. Students have an educational experience of their own choice, and under professional supervision, that promotes personal and professional growth. Students provide direct services to individuals or groups using the skills of communication, interviewing, assessments, intervention, case management, networking, and documentation. They practice a philosophy of service that includes respecting the dignity of all individuals, recognizing individual differences, confidentiality, and ethical practice. Classroom theory is integrated into the practicum experiences where students demonstrate the core skills and competencies of addiction counselors. 12 practicum hours and 1 class hour per week. **Prerequisite:** Enrollment in Human Services or Alcohol/Drug Abuse Counseling program.

MH2169 HUMAN SERVICES PRACTICUM II IN ALCOHOL/DRUG ABUSE SERVICES

A 1-semester course; 4 credit hours. A continuation of Practicum I but with greater involvement in the delivery of direct care services with increased understanding of the operation of the program and opportunity for career development. Classroom theory is integrated into the practicum experiences where students demonstrate the core skills and competencies of addiction counselors. 12 practicum hours and 1 class hour per week. **Prerequisite:** Enrollment in Human Services or Alcohol/Drug Abuse Counseling program.

MH2170 ALCOHOL & DRUG ABUSE

A 1-semester course; 3 credit hours. This course is designed to generate an understanding of drug use/abuse/misuse, theories of addiction, dual diagnosis, and personal social consequences. Emphasis is placed on etiology, pharmacology, assessment, symptomatology, medical complications, treatment, relapse, and prevention. Participants will discuss community approaches to drug abuse, drug education, state and federal legislation, advocacy, family relationships, and networking with self help groups. A primary goal of this course is to provide future and/or present personnel in the field with basic information needed to provide appropriate services. 3 class hours per week. **Prerequisite:** Enrollment in Human Services or Alcohol Drug Abuse Counseling Programs. Students not enrolled in the program may obtain permission of the program coordinator to enroll.

MH2171 COUNSELING TECHNIQUES

A 1-semester course; 3 credit hours. This course will focus on helping students develop general individual counseling techniques and strategies for helping people with life living problems associated with the disease of addiction, mental illness and substance abuse. Special treatment philosophies, settings, systems, and methods will be discussed. Emphasis will also be placed on how to help people maintain sobriety/recovery and cope with relapse. 3 class hours per week. **Prerequisite:** Enrollment in Alcohol/Drug Abuse Counseling program.

ITALIAN

IT4401/IT4402 INTRODUCTORY ITALIAN I & II

A 2-semester course; 3 credit hours per semester. For students who have not completed two years of secondary school Italian or the equivalent as determined by the college. Audio-lingual emphasis. Introduction to grammatical patterns, reading and writing. 3 class hours per week.

LAW

LW6601 INTRODUCTION TO PARALEGALISM

A 1-semester course; 3 credit hours. This introductory course is designed to prepare paralegals for the practical aspects of their future profession, including legal analysis, interviewing, investigation, computer applications in law, and law office administration. In addition, career expectations and employment opportunities are explored. Special consideration will be given to the regulation of paralegals and the ethical issues confronting the paralegal profession, such as conflicts of interest, confidentiality, and the unauthorized practice of law. 3 class hours per week. **Prerequisite:** Students not enrolled in the Paralegal Program need permission of the program coordinator to enroll in this course and must meet the prerequisite requirements of the Program.

LW6635 INTERNATIONAL BUSINESS LAW

A 1-semester course; 3 credit hours. An introduction to the basic aspects of international legal rules as they bear directly on persons and business organizations engaged in commercial transactions across national borders. 3 class hours per week. **Prerequisite:** LW6651 or equivalent.

LW6651 BUSINESS LAW I

A 1-semester course; 3 credit hours. A course presenting an integrated approach to the legal environment of business with a fresh up to date introduction to those aspects of our legal system which cut across all areas of law, establishing a vital foundation for understanding the substantive subjects such as the American system of jurisprudence, constitutional law, the dual court system, administrative agencies, consumer protection, environmental law, Uniform Commercial Code, torts and crimes and a thorough understanding of the Law of Contracts. 3 class hours per week.

LW6652 BUSINESS LAW II

A 1-semester course; 3 credit hours. Continuation of LW6651 developing a basic understanding and application of the Uniform Commercial Code consisting of sales, commercial paper, Law of Agency, banking, Letter of Credit, bulk transfer, documents of title, investments and secured transactions, and a general understanding of business organizations, bankruptcy, and estates and trusts. 3 class hours per week. **Prerequisite:** LW6651.

LW6653 REAL ESTATE LAW

A 1-semester course; 3 credit hours. This course surveys real estate law principles and practice, including antecedent contractual considerations, the purchase and sale agreement, closing requirements, title searching techniques, and landlord/tenant law. Drafts of a residential purchase and sale agreement, as well as all necessary closing papers are required. Students are urged to take GV3300 Introduction to Law prior to or simultaneously with this course. 3 class hours per week. Students not enrolled in the Paralegal Program need permission of the program coordinator to enroll in this course.

LW6661 LITIGATION

A 1-semester course; 3 credit hours. A study of the structure, jurisdiction and procedure of the state and federal courts. Emphasis is on the development of the skills required of a paralegal including: preparation of pleadings, use of rules of procedure, discovery procedure, client intake and case investigation. 3 class hours per week. **Prerequisites:** LW6671. Students not enrolled in the Paralegal Program need permission of the program coordinator to enroll in this course.

LW6662 WILLS, ESTATES & TRUSTS

A 1-semester course; 3 credit hours. A survey of the laws and documents that affect the disposition of an individual's assets at death. Areas addressed include: estate administration, court and probate proceedings, types of wills and trusts, decent, distribution and fiduciary accounting. 3 class hours per week. **Prerequisites:** LW6671. Students not enrolled in the Paralegal Program need permission of the program coordinator to enroll in this course.

LW6663 CORPORATE LAW

A 1-semester course; 3 credit hours. This course first surveys the formation and structure of sole proprietorships, partnerships, and limited partnerships. It then focuses substantial attention on the formation and structure of corporations, covering topics such as financial structure, meetings, reorganization, dissolution, liquidation, mergers and acquisitions, and employment and compensation. Students must draft partnership agreements, as well as the articles of incorporation and bylaws of a corporation. Students are urged to take GV3300 Introduction to Law prior to or simultaneously with this course. 3 class hours per week. **Prerequisites:** LW6671. Students not enrolled in the Paralegal Program need permission of the program coordinator to enroll in this course.

LW6664 FAMILY LAW

A 1-semester course; 3 credit hours. Course surveys family practice and procedure topics including: parental prerogatives, marriage, separation, divorce, custody and support, adoption and guardianship. Students learn to conduct client interviews, and draft pleadings necessary to the general practice of family law. Students are urged to take GV3300 Introduction to Law prior to or simultaneously with this course. 3 class hours per week. **Prerequisites:** LW6671. Students not enrolled in the Paralegal Program need permission of the program coordinator to enroll in this course.

LW6666 TORT LAW

A 1-semester course; 3 credit hours. This course will emphasize substantive tort law topics including, intentional torts (assault, battery, false imprisonment), negligence, professional malpractice, strict liability and products liability. Students will draft and respond to tort-related pleadings, discovery and motions. GV3300 Introduction to Law prior to or simultaneously with this course is highly recommended. 3 class hours per week. **Prerequisites:** LW6671. Students not enrolled in the Paralegal Program need permission of the program coordinator to enroll in this course.

LW6667 COMPUTER APPLICATIONS IN THE LAW

A 1-semester course; 3 credit hours. Survey of legal applications, including, but not limited to, litigation support database systems, timekeeping, advanced computerized legal research, and specific real estate law software programs. Hands-on legal training is emphasized. 3 class hours per week. **Prerequisites:** LW6671, LW6653, LW6664. Students not enrolled in the Paralegal Program need permission of the program coordinator to enroll in this course.

LW6671 LEGAL RESEARCH & WRITING I

A 1-semester course; 3 credit hours. This course is designed to teach students how to use a law library, to perform legal research, to analyze legal problems, to write legal analysis in a variety of different formats, and to use computers as a research tool. Focus is on how to find legal materials, including federal and state case, constitutional and statutory law. Students will learn to use digests and other finding tools, and will learn to update their research by shepardizing. Students will prepare case briefs, written analyses of several legal problems using the IRAC method, and an objective interoffice memorandum. 3 class hours per week. **Prerequisites:** EN4401. Students not enrolled in the Paralegal Program need permission of the program coordinator to enroll in this course.

LW6672 LEGAL RESEARCH & WRITING II

A 1-semester course; 3 credit hours. Designed to be a continuation of LW6671. This course teaches students how to find secondary sources and federal and state regulatory sources. It also further develops students' legal analysis skills by requiring students to synthesize different sources of law. Students will prepare a demand letter, a motion with accompanying persuasive memorandum of law, and an appellate brief. 3 class hours per week. **Prerequisites:** LW6671. Students not enrolled in the Paralegal Program need permission of the program coordinator to enroll in this course.

LW6680 PARALEGAL PRACTICUM

A 1-semester course; 3 credit hours. This practicum provides an opportunity for students enrolled in the Paralegal Program to gain on-the-job experience by working in an internship that requires the performance of paralegal-related tasks. The student will bear the primary responsibility of securing a position. Should the student desire assistance in the internship search process, he or she should make every effort to contact the instructor **two months before** the semester begins. At the beginning of the semester, each student will submit a Training Agreement, which outlines five objectives for the internship and the plan for their successful completion. Students will also create a resume and cover letter, maintain a journal, and submit other assignments as required by the instructor. Students will share their experiences with fellow students in the seminar. 1 class hour and 8 practicum hours per week. **Prerequisites:** Enrollment in the Paralegal Program. Students must have completed LW6601, LW6671, LW6672, and two paralegal electives prior to enrollment in this course.

MANAGEMENT

MG6620 INTRODUCTION TO TOTAL QUALITY MANAGEMENT

A 1-semester course; 3 credit hours. Introduces the principles of company wide quality management including the theories of Deming, Ishikawa, Juran, Crosby and others. Students will apply various tools for process improvement to work-related problems. 3 class hours per week.

MG6625 PLANNING FOR TOTAL QUALITY MANAGEMENT

A 1-semester course; 3 credit hours. Introduces principles, strategies and tools for planning a company wide quality program including Hoshin and other planning models, company self appraisal techniques, employee involvement and product/process development. 3 class hours per week. **Prerequisite:** MG6620 (may be taken concurrently) or equivalent experience.

MG6630 MANAGEMENT OF TOTAL QUALITY SYSTEMS

A 1-semester course; 3 credit hours. Introduces principles and systems for implementing and managing company wide quality practices, including standardization, supplier quality, production systems, support systems, employee involvement, and continuous improvement. 3 class hours per week. **Prerequisite:** MG6620 or equivalent experience.

MG6633 PROCESS CONTROL & IMPROVEMENT

A 1-semester course; 3 credit hours. Introduces methods of managing production within acceptable limits, identifying causes of unacceptable products, preventing defects, and improving processes. Primary focus on Statistical Process Control; also includes graphical problem solving tools, source inspection and poka-yoke systems, team process improvement techniques, and suggestion systems for waste elimination. 3 class hours per week. It is recommended that MG6620 be taken prior or concurrent to this class.

MG6635 MANAGEMENT PRODUCTION DESIGN

A 1-semester course; 3 credit hours. Introduces management concepts and systems of product design to meet customer needs and expectations, including: managing the integrated development of product, processes and support systems; gaining customer satisfaction through Quality Function Deployment; Taguchi and Western design of experiments; and managing the product over time. 3 class hours per week. **Prerequisite:** MG6633 or equivalent experience.

MG6654 PURCHASING I

A 1-semester course; 3 credit hours. Designed as the first of two offerings in purchasing management technology. Emphasis will be placed on the management and in-house organization of the purchasing department. Topics include purchasing procedures, information flow systems, standards and specifications, quality and inspection and decision making techniques for quantity considerations, supplier selection and price determination. 3 class hours per week.

MG6655 PURCHASING II

A 1-semester course; 3 credit hours. Continuation of Purchasing I, this course will cover additional topics in purchasing technology. Contents include: ethics and the law, negotiations, capital goods, commodities and foreign purchasing, disposal of surplus, transportation, research, planning and budgeting, and performance evaluation. 3 class hours per week. **Prerequisite:** MG6654.

MG6666 PRINCIPLES OF MANAGEMENT

A 1-semester course; 3 credit hours. An introduction to the principles and practices of management, with emphasis on the management functions of planning, organizing, staffing directing and controlling. The course serves the dual purpose of giving the students a basic foundation of management concepts and an understanding of the organization within which they must work. 3 class hours per week.

MG6670 NEGOTIATIONS IN BUSINESS

A 1-semester course; 3 credit hours. Designed to provide the student with an understanding of various negotiating techniques and their application in different circumstances. Discussions include why these techniques work, how they work, when they should be used and how to defend against their misuse. Purchasing professionals need these skills in the daily performance of their duties; other managers will benefit from these techniques as well. 3 class hours per week.

MG6671 MEETING & CONVENTION MANAGEMENT

A 1-semester course; 3 credit hours. This course provides a solid foundation for meeting and convention management. The course of study includes an overview of the industry, convention and meeting planning processes, the details essential to successful conventions and meetings, and techniques for reaching target markets. 3 class hours per week. **Prerequisite:** BU4405 Introduction to Hospitality and Tourism or equivalent experience.

MG6676 HUMAN RESOURCES MANAGEMENT

A 1-semester course; 3 credit hours. Principles and human relations problems involved in the administration of personnel. Topics include job analysis and specification, recruitment, selection and training, job evaluation, supervision of employees, and salary and wage administration and labor relations. 3 class hours per week.

MG6686 SMALL BUSINESS MANAGEMENT

A 1-semester course; 3 credit hours. Covers the challenges and objectives of owning a small business. It will identify the types of individuals who ought to consider self-entrepreneurship as well as what type of business one should enter. Full planning and executing of the start-up of a small business and/or entering an existing business. Planning, organizing, directing and controlling the activities of the firm. 3 class hours per week.

MG7700 INTRODUCTION TO STRATEGIC MANAGEMENT

A 1-semester course; 3 credit hours. Reviews the nature and importance of strategic management in business, industry and service organizations. Topics include: basics of strategic analysis, implementation and management of change and innovation; using group dynamics and effective presentational skills in the integration of different operations and functions in business management; and analysis of various strategic situations in business using a case study approach. 3 class hours per week.

MG7701 PRINCIPLES OF MATERIALS MANAGEMENT
 A 1-semester course; 3 credit hours. Designed to introduce the student to materials management. From a broad review of the growth of modern material control theories and principles, this course progresses to a detailed review of the major functional areas within materials: production control, inventory control, purchasing, shipping, receiving, stockrooms and traffic. 3 class hours per week.

MG7704 INVENTORY MANAGEMENT

A 1-semester course; 3 credit hours. Includes a study of general inventory management, inventory management systems and finished goods distribution. General inventory management addresses objectives and decisions, accounting and control of inventory and the relationship of inventory management to other business functions. Inventory management systems deals with the mathematical models used to describe and predict inventory results. Finished goods distribution develops the procedures and rules used to achieve inventory results in this area. 3 class hours per week. **Prerequisite:** Principles of Materials Management or equivalent field experience.

MG7705 MASTER PLANNING

A 1-semester course; 3 credit hours. Covers two related areas: forecasting, which is concerned with future predictions, and master scheduling, which is concerned with the preparation and maintenance of an anticipated build schedule and master game plan. 3 class hours per week. **Prerequisite:** Principles of Materials Management or equivalent field experience.

MG7706 MATERIAL REQUIREMENTS PLANNING

A 1-semester course; 3 credit hours. This course covers the principles of material requirements planning or MRP, a timed-phased planning technique that combines two ideas: calculation of dependent demand for component items and the addition of timing to inventory status data. 3 class hours per week. **Prerequisite:** Principles of Materials Management or equivalent field experience.

MG7720 PRODUCTION & CAPACITY MANAGEMENT

A 1-semester course; 3 credit hours. Provides the student with an understanding of the techniques and principles used by managers to plan and control factory capacities, and to schedule, control and assess the effectiveness of production operations. 3 class hours per week. **Prerequisite:** Principles of Materials Management or equivalent field experience.

MG7730 JUST-IN-TIME MANUFACTURING

A 1-semester course; 3 credit hours. Provides the student with a thorough understanding of the principles of Just In Time manufacturing, its many aspects and its implementation. 3 class hours per week. **Prerequisite:** MG7701 Principles of Materials Management or equivalent field experience.

MARKETING

MK6672 MARKETING FOR HOSPITALITY & TOURISM
 A 1-semester course; 3 credit hours. This course provides a practical managerial approach to the study of hospitality and tourism marketing principles. Emphasis is placed on the four "P's" of marketing, Product, Place, Price and Promotion. Through hospitality marketing case studies, the student will learn to apply marketing theory toward problem identification and action planning processes. 3 class hours per week. **Prerequisite:** BU4405 Introduction to Hospitality and Tourism or equivalent in experience.

MK6678 PRINCIPLES OF MARKETING

A 1-semester course; 3 credit hours. Introduction to marketing with emphasis placed on the firm as a marketing system which must survive in its external environment of markets, resources and the general society. The concepts of market segmentation, corporate objectives, marketing strategies and marketing information systems will be stressed. 3 class hours per week. **Prerequisite:** BU4400 Introduction to Business.

MK6679 ADVERTISING

A 1-semester course; 3 credit hours. Analysis of buying motives and the development of various advertising appeal. Planning, budgeting and testing of phases of the program and the several advertising media. 3 class hours per week.

MK6681 SALESMANSHIP

A 1-semester course; 3 credit hours. Fundamentals of salesmanship by studying the behavioral aspects of the persuasion process; a systematic approach to selling which the student can use to develop the techniques which fit his own personality and particular situation. 3 class hours per week.

MK6685 MARKETING ENTREPRENEURIAL VENTURES

A 1-semester course; 3 credit hours. Marketing principles and strategies for entrepreneurial ventures. Case studies which focus on the application of marketing tools and techniques to small businesses will be used. Students will participate in the process of creating a marketing plan for a small company. 3 class hours per week. **Prerequisites:** BU4450 Introduction to Entrepreneurship, MK6678 Principles of Marketing.

MATHEMATICS

Note: Students enrolling in any math course must first take the college assessment test. Placement is according to assessment test results.

MA0020 BASIC MATHEMATICS

A 1-semester course; 3 credit hours. Designed to provide basic mathematical skills required in other courses. Topics include complete review of arithmetic and an introduction to algebra and geometry, emphasizing practical applications. **This course is considered a developmental course and does not carry graduation credit. It is not usually transferrable. Students who receive less than a C grade will be required to repeat this course.** 2 class hours and 2 lab hours per week. **Prerequisite:** Recommendation of instructor or placement from assessment exam.

MA0030 BASIC ALGEBRA I

A 1-semester course; 3 credit hours. Designed to prepare students for other courses which require basic skills in algebra. Topics include number systems, variable expressions, linear equations and inequalities, geometry, graphing and systems. **This course is considered a developmental course and does not carry graduation credit. It is not usually transferrable.** 2 class hours and 2 lab hours per week. **Prerequisite:** C or better in MA0020, or placement from assessment exam.

MA0040 BASIC ALGEBRA II

A 1-semester course; 3 credit hours. Designed as a sequel to Basic Algebra I or as a first course for students who have had at least one year of high school algebra. Topics include polynomials, factoring, algebraic fractions, exponents, radicals and quadratics equations. **This course may not carry graduation credit in some programs. Students should check individual programs for math requirements.** 2 class hours and 2 lab hours per week. **Prerequisite:** One year of high school algebra or a "C" or better in MA0030 or equivalent, or placement from assessment exam.

MA5506 STATISTICS

A 1-semester course; 3 credit hours. Set theory approach to probability. Descriptive statistics. Probability distributions. Sampling inferences from statistics. Hypothesis testing. Linear regression and correlation; computer component when applicable. 3 class hours per week. **Prerequisite:** Two years of high school algebra or "C" or better in MA5615 or equivalent.

MA5520 LIBERAL ARTS MATHEMATICS I

A 1-semester course; 3 credit hours. Surveys some of the important ideas in mathematics. Topics such as problem solving by inductive and deductive reasoning, mathematical logic and number systems are included. 3 class hours per week

MA5525 LIBERAL ARTS MATHEMATICS II

A 1-semester course; 3 credit hours. Explores some of the interesting and useful aspects of mathematics such as probability, statistics, topology, mathematical modeling and the philosophy of mathematics. 3 class hours per week.

MA5613 BUSINESS MATHEMATICS

A 1-semester course; 3 credit hours. The mathematics used in business transactions. This course will not carry graduation credit in some programs. (For example, Engineering and Technology programs, Liberal Arts, General Studies.) Check individual programs for math requirement. 3 class hours per week.

MA5614 INTRODUCTION TO DISCRETE MATHEMATICS

A 1-semester course; 3 credit hours. Introduction to the study of finite systems. Topics will include logic and sets, relations and functions, mathematical induction and proofs, combinatorics, probability, matrices, graphs and digraphs. Special emphasis is given to applications in the computer science field. 3 class hours per week. **Prerequisite:** 2 years of high school algebra or equivalent.

MA5615 COLLEGE ALGEBRA

A 1-semester course; 3 credit hours. Provides a comprehensive knowledge of algebra using a strong functional approach and an emphasis on graphing to visualize and solve real life problems. Topics include linear and quadratic modeling; solutions of equations and inequalities; symmetry, translations and reflections of graphs; analysis of functions using domain/range and increase/decrease; composition, inverse and one to one functions; logarithmic and exponential functions; and systems of equations. Credit not given for both College Algebra and College Algebra and Trigonometry. 3 class hours per week. **Prerequisite:** 2 years of high school algebra or a C or better in MA0040 Basic Algebra II or equivalent.

MA5620 MINI TRIG

A 1-semester course; 1 credit hour. Introduction to trigonometry designed for the student with two years of high school algebra, but little or no trigonometry. This course covers all the trigonometric topics discussed in MA5621. 1 class hour per week.

MA5621 COLLEGE ALGEBRA & TRIGONOMETRY

The first course in a 2-semester sequence: 4 credit hours. This course and its sequel MA5622 are intended as preparation for the calculus sequence beginning with MA5690. This course covers two interrelated areas: algebra using a strong functional approach and an introduction to trigonometry. Both emphasize graphing to visualize and solve real life problems. Topics include: linear and quadratic modeling; solutions of equations and inequalities; symmetry, translations and reflections of graphs; analysis of functions using domain/range and increase/decrease; composition, inverse, one to one, and trigonometric functions; vectors; DeMoivre's Theorem; and determinants. Credit not given for both College Algebra and College Algebra and Trigonometry. 4 class hours per week or 3 class hours plus a 2-hour lab per week.

Prerequisite: 2 years of high school algebra or C or better in MA0040 Basic Algebra II or equivalent.

MA5622 ADVANCED ALGEBRA & TRIGONOMETRY

Second course in a 2-semester sequence; 4 credit hours. Continuation of MA5621. Advance topics in algebra and trigonometry are covered. 4 class hours per week or 3 class hours plus a 2-hour lab per week. **Prerequisite:** C or better in MA5621 or equivalent.

MA5673 QUANTITATIVE METHODS FOR BUSINESS/SOCIAL/LIFE SCIENCES

A 1-semester course; 3 credit hours. Topics included in this algebra based course are matrices, linear systems of equations and inequalities, linear programming, probability, decision theory and statistics. Special emphasis is given to applications in business, social and life sciences. 3 class hours per week. **Prerequisite:** C or better in MA5615 or 2 years of high school algebra or equivalent.

MA5675 CALCULUS I FOR BUSINESS/SOCIAL/LIFE SCIENCES

First course in a 2-semester sequence: 3 credit hours. Topics included in this algebra based course are polynomial, exponential and logarithmic functions, limits and differentiation. Special emphasis is given to applications in business, social and life sciences. 3 class hours per week. **Prerequisite:** 2 years of high school algebra, C or better in MA5615 or equivalent.

MA5676 CALCULUS II FOR BUSINESS/SOCIAL/LIFE SCIENCES

Second course in a 2-semester sequence; 3 credit hours. Continuation of MA5675. This course includes techniques of integration, differential equations, and multi-variable functions. 3 class hours per week. **Prerequisite:** C or better in MA5675.

MA5685 DIFFERENTIAL EQUATIONS

A 1-semester course; 4 credit hours. This course includes fundamentals of ordinary linear differential equations, LaPlace Transforms and numerical methods of solutions. 4 class hours per week. **Prerequisite:** C or better in MA5693 or equivalent.

MA5688 MATH FOR ELECTRONICS

A 1-semester course; 4 credit hours. This course is intended solely for students enrolled in certain technical programs and certificates (for example Electronic Technology and Computer Maintenance) and will not carry graduation credit in non-technology programs. Topics include algebraic fractions, radicals, systems of equation, inequalities, and quadratic equations; as well as topics in trigonometry, complex numbers and DC series circuits. It will prepare students for College Algebra & Trigonometry. 4 class hours per week. **Prerequisite:** One year of high school algebra or a C or better in MA0030 Basic Algebra I.

MA5689 CALCULUS ENRICHMENT LAB

A 1-semester course; 1 credit hour. Assists students to understand the concepts in calculus by doing projects and examining graphs with graphing calculators and computers. Topics include introduction to graphing calculators, domain/range, limits, continuity, differentiation, Newton's Method, integration, and Simpson's Rule. **Prerequisite:** MA5690 (may be taken concurrently).

MA5690 CALCULUS I

The first course in a 3-semester sequence; 4 credit hours. This sequence is designed for the Engineering, science or mathematics major who needs to master the techniques of calculus. Beginning with functions and limits, this course includes techniques and applications of differentiation, indefinite and definite integrals and applications of integration. 4 class hours per week. **Prerequisite:** 2 years of high school algebra and a semester of trigonometry, C or better in MA5622, or equivalent.

MA5692 CALCULUS II

The second course in a 3-semester sequence; 4 credit hours. Continuation of MA5690. Topics include: applications of integration including, area and volume, techniques of integration, improper integrals and power series. 4 class hours per week. **Prerequisite:** C or better in MA5690 or equivalent.

MA5693 CALCULUS III

The third course in a 3-semester sequence; 4 credit hours. Continuation of MA5690 and MA5692. Topics include vector calculus, partial differentiation and multiple integration. 4 class hours per week. **Prerequisite:** C or better in MA5692 or equivalent.

MEDICAL ASSISTANT

MS1002 FUNDAMENTALS OF MEDICAL ASSISTING I: CLINICAL

A 1-semester course; 2 credit hours. A study of the principles of the clinical duties performed by the medical assistant. Included are vital signs, positioning and draping, electrocardiographic (EKG) techniques, sterilization, and aseptic techniques. An introduction to pharmacology is included. 1 class hour and 2 lab hours per week.

MS1005 MEDICAL TRANSCRIPTION FOR MEDICAL ASSISTANTS

A 1-semester course; 2 credit hours. Introduction to the role of the transcriptionist in a variety of medical settings. Care, operation, utilization of keyboarding and transcribing equipment as well as transcribing techniques is included. Emphasis is placed on quality rather than quantity of production. Units included are: History and Physicals; Radiology Reports; Discharge Summaries; Operations; Pathology & Autopsy reports. 1 class hour and 2 lab hours per week. **Prerequisite:** Keyboarding - 30 wpm. **Co-requisite:** HS1010 or equivalent.

MS1015 FUNDAMENTALS OF MEDICAL ASSISTING: ADMINISTRATIVE

A 1-semester course; 5 credit hours. This course will offer the students the opportunity to explore, study and practice the numerous administrative business techniques which are utilized for communications and medical and financial records in a variety of health care settings. It will concentrate on the various insurance plans available to the health care consumer. The proper method of filing third-party claims and crediting reimbursements will focus on the use of the computer in the medical office environment. Computer applications as they relate to third-party billing and completion of insurance forms will be stressed. The ethical structure and general principles of law which affect the role of the medical assistant is included. 3 class hours and 6 lab hours per week.

MS2002 FUNDAMENTALS OF MEDICAL ASSISTING II: CLINICAL

A 1-semester course; 2 credit hours. Continuation of Fundamentals of Medical Assisting I: Clinical. Included are examining room armamentarium and parenteral administrations. Pharmacological studies are also included. 1 class hour and 2 lab hours per week. **Prerequisite:** A grade of C or better in MS1002.

MS2010 BASIC LABORATORY PROCEDURES FOR MEDICAL ASSISTING

A 1-semester course; 2 credit hours. Students develop the skills necessary to perform basic routine laboratory procedures which are included within the parameters of the role of the Medical Assistant. Included are correlated theory and supervised laboratory practice. 1 class hour and 3 lab hours per week. **Prerequisite:** A grade of C or better in MS1015 and MS1002.

MS2012 MEDICAL ASSISTING PRACTICUM

A one semester course; 4 credit hours. This course requires a minimum of 240 hours of supervised, non-salaried experience in a variety of health care settings. Students will be assigned on a rotating basis. 16 practicum hours per week. **Prerequisite:** A grade of C or better in MS1015 and MS1002.

MS2015 MEDICAL ASSISTANT SEMINAR

A 1-semester course; 1 credit hour. This course explores the professional issues that affect the medical assistant. The current trends in education, certification and employment and their impact on the practicing medical assistant will be emphasized. Employment seeking techniques such as resume preparation and interviewing skills will be included. 1 class hour per week.

MS3010 PHLEBOTOMY

A 1-semester course; 2 credit hours. This course will focus on obtaining hematological specimens from patients by venipuncture and micro-collection. Included are units on the circulatory system, collection equipment, infection control, requisitioning, specimen transport, quality control and safety. 1 class hour and 2 lab hours per week.

MS3011 ELECTROCARDIOGRAPHIC (EKG) TECHNIQUES

A 1-semester course; 2 credit hours. This course will include the anatomy and physiology of the circulatory system. Units on electrocardiographic techniques, cardiac arrhythmia recognition and the role of the EKG technician are included. Students will have the opportunity to practice EKG's in the lab setting. 1 class hour and 2 lab hours per week.

MUSIC

MU7051 INTRODUCTION TO MUSIC

A 1-semester course; 3 credit hours. A course in the appreciation of music of European, American and non Western cultures from classical to rock. Emphasis will be on listening skills, expansion of listening perception, and the elements of music. 3 class hours per week.

MU7052 SURVEY OF MUSIC: ANCIENT TO MODERN TIMES

A 1-semester course; 3 credit hours. A chronological survey of the music of Western civilization from ancient to modern times. Emphasis is on the historical evolution of musical styles. Students will study great works of music including some aspects of non-western music. Comparisons of music of the past will be made with music of the present. 3 class hours per week.

MU7061 MUSIC READING & THEORY I

A 1-semester course; 3 credit hours. Music reading is introduced and developed through computer assisted instruction as well as lectures, discussions and listening. Students will study various styles of music such as rock, pop, jazz and classical. Students will be taught to read and notate pitch, rhythm and music symbols and will learn construction of major scales. 3 class hours per week.

MU7062 MUSIC READING & THEORY II

A 1-semester course; 3 credit hours. Continuation of the content and methods used in Music Reading I with advanced exercise in reading and writing music. Development or knowledge about minor scales, intervals, harmony from the triad to the seventh chord, cadences, non-harmonic tones, chord progressions with harmonization of melody and music composition in the song form. 3 class hours per week. **Prerequisite:** MU7061 Music Reading and Theory I or permission of the instructor.

MU7080 PIANO I

A 1-semester course; 3 credit hours. Designed to provide students with a strong background in playing the piano. Students will receive training in such areas as technique, intervals, ear training, rhythm, fingering, basic harmony, performance, and ensemble playing. The course will introduce students to effective practice methods. They will also be introduced to piano literature in its historical perspective. Open to beginners or to those who want to improve on skills already acquired. 2 class hours and 2 lab hours per week.

MU7097 PERFORMANCE ENSEMBLE I

A 1-semester course; 3 credit hours. Ensembles of all sizes in rock, folk, jazz and classical music organized for the purpose of gaining experience in preparing and performing music before audiences. Video tape and cassette recordings of class performances are made for study purposes. Students enrolling must be capable of performing on a musical instrument or as a singer. 4 class hours (2 class and 2 lab hours) per week.

MU7098 PERFORMANCE ENSEMBLE II

A 1-semester course; 3 credit hours. Continuation of MU7097 Performance Ensemble I with the requirement of further progress and musical development. 4 class hours (2 class and 2 lab hours) per week. **Prerequisite:** MU7097.

MU7100 HARMONY I

A 1-semester course; 3 credit hours. An intensive study of key signature, modes, intervals and triads leading to the basic principles involved in part writing, as exemplified by the music of the Common Practice period. Systematic investigation of the problems involving the use of dissonance (non-harmonic tones) within a basic four-part format. Correlated outside work. 3 class hours per week. **Prerequisite:** MU7090, or the ability to read music and knowledge of the major scales.

MU7110 CHORUS I

A 1-semester course; 3 credit hours. The Northern Essex Community College Chorus performs, in concert, music from pop to classical. Experience in singing, vocal-part learning and performance is developed. Auditions will be held for voice placement. It is recommended that students take MU7061: Music Reading and Theory I at the same time. 4 class hours (2 class hours and 2 lab hours) per week.

MU7111 CHORUS II

A 1-semester course; 3 credit hours. The Northern Essex Community College Chorus performs, in concert, music from pop to classical. Experience in singing, vocal-part learning and performance is developed. Students will need to demonstrate skills in reading music. It is recommended that students take MU7062: Music Reading and Theory II at the same time. 4 class hours (2 class hours and 2 lab hours) per week. **Prerequisite:** Chorus I, MU7110.

MU7131 MUSIC TECHNOLOGY: SOUND

A 1-semester course; 3 credit hours. An understanding of music through experiential activities in manipulating sound using sampling processing with the Roland S50 Digital Sampler and related software on the Macintosh computer. The Sampling Process involves Digitally Recording a sound and manipulating it through techniques such as looping, envelope shaping and combining tones. Introduction to aspects of MIDI (Musical Instrument Digital Interface) is included. 3 class hours per week.

MU7132 MUSIC TECHNOLOGY: COMPOSITION

A 1-semester course; 3 credit hours. The focus of this course is to create music composition using appropriate software programs on the Macintosh computer and the multi-tracking techniques of sequencing and recording. Students will also learn patch programming, synchronization and the use of the drum machine. The course will cover use and understanding of the Musical Instrument Digital Interface (MIDI) protocol. Students develop their own compositions at the level of their own ability and music knowledge. Selected compositions will be presented in a college concert. 3 class hours per week.

NURSING – PRACTICAL**PN0101 PRACTICAL NURSING I**

A 1-semester course; 10 credit hours. This course focuses on the fundamental skills and principles of administering basic nursing care to geriatric clients in clinical settings. Emphasis is placed on developing assessment skills needed to recognize and meet basic nursing needs; providing a safe comfortable physical environment; meeting the personal care needs common to all clients in simple nursing situations. Introduction to general surgical care, drug administration, proper communication techniques, and legal and ethical aspects of nursing care are included. The clinical component is correlated with the didactic, utilizing acute and non-acute community settings. 8 class hours and 13 clinical hours per week. **Prerequisite:** Acceptance into the Practical Nursing Program.

PN0201 PRACTICAL NURSING II

A 1-semester course; 10 credit hours. This course introduces the student to the role of the Practical Nurse in the health care delivery to clients in all stages of growth and development, focusing on common medical surgical problems and the related pharmacologic and nutritional protocols in the therapeutic/restorative plan of care. In each unit the unique aspects of the pediatric, adult client will be identified. The clinical component, utilizing adult and geriatric medical-surgical and pediatric units, is designed to correlate the didactic with the nursing care practice. 8 class hours and 13 clinical hours per week. **Prerequisite:** Completion of Practical Nursing I with a grade of C or better; PS1210 Developmental Psychology I and SC5503 Integrated Science I.

PN0301 PRACTICAL NURSING III

A 10-week course; 8 credit hours. This course provides the basic nursing skills necessary for an entry level Graduate Practical Nurse position. Proceeding from simple to complex, normal to abnormal, family-centered nursing care concepts and skills are developed in the obstetrical clinical settings. In various medical-surgical clinical settings, emphasis is placed on developing self initiative and graduate level skills and responsibilities. Included is further development of the nursing process as it is reflected in all aspects of health care and the nursing implications of the administration of common medications. 7-1/2 class hours and 13 clinical hours per week. **Prerequisite:** Completion of Practical Nursing II with a grade of C or better; SC5504 Integrated Science II and PS1211 Developmental Psychology II.

PN0310 ISSUES & TRENDS IN PRACTICAL NURSING

A 10-week course; 1 credit hour. This course explores the social, ethical and professional issues that affect nursing and influence nursing practices. A historical overview of nursing and practical nursing is presented; however, emphasis is placed on current trends in nursing education and practice and their impact on the practical nurse. 1-1/2 class hours per week.

NURSING – REGISTERED**NS6603 NURSING I**

A 1-semester course; 8 credit hours. Nursing is presented as a unique profession that utilizes critical thinking in applying the roles of the Associate Degree Nurse (Provider of Care, Manager of Care, and Member Within the Profession). Nursing I is an introductory clinical/classroom course which helps the student learn how clients are challenged to maintain optimal wellness. Beginning skills are learned in the Health Education Support Center and performed in the clinical setting with faculty guidance. The student focuses on developing basic assessment skills in providing holistic, safe, and ethical care to culturally diverse clients in a variety of health care settings. **Day and Evening Option Hours:** Class meets 4 hours per week. Clinical meets 12 hours a week. **Prerequisite:** See appropriate program options for specific prerequisites.

NS6604 NURSING II

A 1-semester course; 8 credit hours. Students continue to build on theoretical and clinical foundations developed in Nursing I. Nursing II focuses on applying the holistic approach to the care of clients with common health stressors, using a simple to complex format. Self-direction and teaching/learning principles are emphasized when developing and carrying out a plan of care for individuals of various ages and cultures. Within a variety of health care settings, students apply the nursing process in further developing assessment skills and interventions that promote the health status of clients and families. The Health Education Support Center continues to be an integral part of the students' learning process. **Day and Evening Option Hours:** Class meets 4 hours a week. Clinical meets 12 hours a week. **Prerequisite:** See appropriate program options for specific prerequisites.

NS6653 NURSING III

A 1-semester course; 8 credit hours. Students will continue to build knowledge gained in previous nursing courses. This course emphasizes the holistic approach in the care of families. Students are prepared to manage small groups of clients throughout the life cycle and to individualize their plan of care. A variety of clinical settings are utilized in caring for clients and families from culturally diverse backgrounds. Teaching/learning principles are expanded to include the development of clinical conferences for the peer group. Selected skills are presented in the Health Education Support Center. **Day and Evening Option Hours:** Class meets 4 hours a week. Clinical meets 12 hours a week. Prerequisite: See appropriate program options for specific prerequisites.

NS6654 NURSING IV

A 1-semester course; 10 credit hours. This course builds upon the theoretical basis and application of nursing practice presented in previous nursing courses. Nursing IV emphasizes holism in the care of clients in acute care, rehabilitation centers, and community settings. Students integrate critical thinking concepts in the application of crisis intervention theory while caring for individuals and families experiencing the expanding social problems of domestic violence, abuse, and maladaptive behavior. The student utilizes the nursing process to promote the maximum health potential for clients with complex health problems. A major focus for the student is the application of leadership/management skills in the care of individuals or groups of clients from culturally diverse backgrounds. Students utilize teaching/learning principles and lead clinical conferences. Current professional issues in nursing are presented for peers and others. **Day and Evening Option Hours:** Class meets 5 hours a week. Clinical meets 15 hours a week. Prerequisite: See appropriate program options for specific prerequisites.

PHILOSOPHY

PH0001 EARLY & MEDIEVAL PHILOSOPHY

A 1-semester course; 3 credit hours. An adventure in the history of ideas. A study of the rise and evolution of western philosophy from the early Greeks to the Renaissance. Emphasis on Plato, Aristotle, Augustine and Aquinas. 3 class hours per week.

PH0002 MODERN PHILOSOPHY

A 1-semester course; 3 credit hours. A further adventure in the history of ideas. A study of the progress of western philosophy from the Renaissance to the twentieth century. Special emphasis on Descartes, Locke, Hegel, Nietzsche, Marx and Sartre. 3 class hours per week.

PH1101 INTRODUCTION TO PHILOSOPHY

A 1-semester course; 3 credit hours. The aims, nature and problems of philosophy, with emphasis upon theory of knowledge, metaphysics, ethics and philosophy of religion. 3 class hours per week.

PH1102 ISSUES IN PHILOSOPHY

A 1-semester course; 3 credit hours. A critical analysis of the philosophic issues concerning human nature, freedom and determinism, esthetics, social and political philosophy and philosophy of history. Note: Not a sequential course. 3 class hours per week.

PH1141 ETHICS

A 1-semester course; 3 credit hours. A study of representative ethical systems and how they deal with moral issues. Attention will be given to the meanings of basic terms and to the application of ethics to major personal and social problems of our times such as those in law, medicine, international issues, sexuality and lifestyle. 3 class hours per week.

PH1150 PRACTICAL LOGIC

A 1-semester course; 3 credit hours. This course is designed to introduce the student to the basics of reasoning, argumentation, and critical thinking. Included are criteria of sound reasoning, rational assessment of arguments, common fallacies, and basic informal logic. 3 class hours per week.

PH1151 INTRODUCTION TO LOGIC

A 1-semester course; 3 credit hours. Course will inquire into the nature of critical thinking. Such topics as the functions of language, experimental truth and logical validity, the structure of deductive arguments, and the basic inductive methods will be considered. 3 class hours per week.

PHYSICAL/OUTDOOR EDUCATION & LEISURE STUDIES

PE1003 BACKPACKING

A 1/2-semester course; one credit hour. A course designed to introduce the students to both the recreational and fitness benefits, as well as, the skills of backpacking. The importance of the selection and maintenance of equipment, clothing, food, weather conditions and other related factors will be considered. A trip and hike will further acquaint the students with hiking opportunities and locations. 3 class hours per week.

PE1008 CANOEING

A 1/2-semester course; 1 credit hour. The course follows the American Red Cross Small Craft certificate program for canoeing. Some of the skills include: paddling strokes, canoe rescue, artificial respiration and a trip. Students successfully completing the course will receive the American Red Cross Canoeing Certificate. All canoeing equipment is provided. 3 class hours per week.

PE1014 GOLF

A 1/2-semester course; 1 credit hour. The fundamentals of golf; grip, stance, rules, swing and etiquette. Practice will be given with long and short irons, drives and putters. 3 class hours per week.

PE1020 SELF DEFENSE

A 1/2-semester course; 1 credit hour. This course will include instruction and practice in the art of self defense for men and women. Basic stance, kicks, punches, defenses, and specific moves are demonstrated by the students (not a belt degree program). 3 class hours per week.

PE1031 WEIGHT TRAINING

A 1/2-semester course; 1 credit hour. Basic principles and skills of weight training. Emphasis on cardiovascular and flexibility activities. 3 class hours per week.

PE1032 MOUNTAIN BIKING

A 1/2-semester course; 1 credit hour. This is an introductory course to off-road mountain biking. This course will cover conditioning for biking, bike care and maintenance, trip planning, off-road safety and rescue procedures, environmental concerns, basic riding skills and knowledge necessary to enjoy this fast growing sport. All equipment will be provided. 3 class hours per week.

PE1036 WALKING FOR FITNESS

A 1/2-semester course; 1 credit hour. This is an exercise and activity class. The emphasis is on covering the basics of walking as an all around conditioning activity, which helps develop total well-being. Classes consist of walking workouts and laboratory activities. Students of all ages and levels of fitness will profit from participation and gradually improve. 3 class hours per week.

PE1038 CROSS-COUNTRY SKIING

A 1/2-semester course; 1 credit hour. This course includes the skills necessary for skiing uphill, downhill, striding on flat terrain, poling and different types of skiing equipment. Class time will be spent outdoors skiing and practicing skills. All skiing equipment is provided. 3 class hours per week.

PE1039 ROCK CLIMBING

A 1/2-semester course; one credit hour. This fundamental course will include basic techniques; belaying, rappelling, ascents, descents, the proper use of personal climbing equipment and safety considerations. Most classes will be held outdoors. All climbing equipment is provided. 3 class hours per week.

PE1041 YOGA I

A 1-semester course; 2 credit hours. This is a course in self-realization covering Hatha exercises and breathing, nutrition, relaxing, concentration and Eastern philosophy. Classes will consist of practice and discussion aimed at improving life through the wisdom of this timeless discipline. 1 class hour and 2 lab hours per week.

PE1043 YOGA II

A 1-semester course; 2 credit hours. This is a continuation of Yoga I, a self-enrichment course, covering hatha exercises, breathing, nutrition, relaxing, awareness and Eastern philosophy. Emphasis in this second semester is on the application of yoga to everyday life; performing more challenging postures; and remaining in these positions somewhat longer. 1 class hour and 2 lab hours per week. **Prerequisite:** Yoga I or permission of the instructor.

PE1070 BALLET I

A one-semester course; 2 credit hours. Instruction in the basic skills of ballet technique. The combinations of movements from the classical ballet vocabulary will emphasize proper alignment, strength, speed, endurance, and flexibility. The course will also include an overview of the history of ballet. 1 class hour; 2 lab hours per week.

PE1071 BALLET II

A one-semester course; 2 credit hours. This class will review basic ballet techniques and progress to refinement of technique through more advanced work. The combinations of movements from the classical ballet vocabulary will continue to emphasize proper alignment, strength, endurance, speed, and flexibility. 1 class hour and 2 lab hours per week. **Prerequisite:** Ballet I or permission of instructor.

PE2001 INTRODUCTION TO CAREERS IN PHYSICAL EDUCATION

A 1-semester course; 3 credit hours. A career-oriented course designed to introduce new students to the profession of physical education, and to make them aware of career alternatives within the field of physical education and to familiarize them with the requirements and professional preparation. 3 class hours per week.

PE2009 JAZZ DANCE

A 1-semester course; 2 credit hours. The focus of the course will be on developing specialized technique through the barre and basic jazz movements, as well as, providing basic instruction in a variety of jazz styles. The course will include a study of the history of jazz. 1 class hour and 2 lab hours per week.

PE2010 MODERN DANCE I

A 1-semester course; 2 credit hours. A study of the fundamentals of modern dance technique. Emphasis is on cultivating a sound basic technique as well as self-expression through movement. The beginnings of modern dance will be examined with emphasis on the four pioneers: St. Denis, Shawn, Graham, Humphrey, who continued the legacy of Duncan. 1 class hour and 2 lab hours per week.

PE2011 MODERN DANCE II

A 1-semester course; 2 credit hours. Utilizing basic dance skills from Modern Dance I, the student learns advanced techniques and skills to attain proficiency. While the emphasis is on sound technique, time is also reserved for creative activity. A study of the history of modern dance will continue with emphasis on dance figures following the four pioneer era. 1 class hour and 2 lab hours per week.

PE2012 FIRST AID & CPR

A 1-semester course; 3 credit hours. This course prepares the student to deal with most types of medical emergencies. Classes include simulated disaster, ambulance tour, practical skills, knowledge of the National Safety Council First Aid and CPR book. When requirements are met, a standard first aid and/or CPR certification are earned from the National Safety Council's Green Cross. 3 class hours per week.

PE2020 FOUNDATIONS OF HEALTH & FITNESS

A 1-semester course; 3 credit hours. A course designed as an individual health improvement and maintenance program, focusing on the concepts of wellness, positive lifestyles, individual health and fitness profiles, graded and controlled exercise, and monitoring and recording of certain body functions. Provides students with a series of analyses. The course merges fitness/exercise, nutrition/weight control, and stress management into a single program to help students develop an understanding of how to adapt their lifestyle to achieve a better quality of life. 3 class hours per week.

PE2296 AEROBICS IN THEORY & PRACTICE

A 1-semester course; 2 credit hours. An exercise and activity class emphasizing the physiological components of aerobic exercise and its effect on the cardio-respiratory system. Classes consist of various types of aerobic workouts and laboratory activities. Students of all levels of fitness will profit from participation and gradually improve. 1 class hour; 2 lab hours per week.

PHYSICS

PI5621 APPLIED PHYSICS I

A 1-semester course; 4 credit hours. This course is designed for the student in science, electronic technology, or a health profession such as physical therapy. Subject matter covered will include: principles of mechanics, concurrent forces, nonconcurrent forces, friction, elasticity, motion, forces and motion, work and energy, power, impulse and momentum, and simple harmonic motion. A non-calculus approach. 3 class hours and 3 lab hours per week.

Prerequisite: MA5621 or equivalent.

PI5622 APPLIED PHYSICS II

A 1-semester course; 4 credit hours. A continuation of PI5621. Subject matter covered will include: fluid mechanics, sound, Archimedes principle, Bernoulli's equation, heat and the laws of thermodynamics, properties of gases, electricity and magnetism, wave motion, reflection, refraction, and lenses. A non-calculus approach. 3 class hours and 3 lab hours per week. **Prerequisite:** PI5621 and MA5621 or equivalent.

PI5623 ENGINEERING PHYSICS I

A 1-semester course; 4 credit hours. To be taken concurrently with MA5692. The principles of mechanics, including composition and resolution of vectors, statics, moments, rectilinear motion, Newton's second law, motion of a projectile, work and energy, impulse and momentum, circular motion, rotational kinematics and dynamics, elasticity, harmonic motion. 3 class hours and 3 lab hours per week. **Prerequisite:** MA5690 or equivalent.

PI5624 ENGINEERING PHYSICS II

A 1-semester course; 4 credit hours. To be taken concurrently with MA5693. Heat, sound and optics, including the following: thermometry, quantity of heat, change of state, work and heat; heat transfer, thermal properties of matter, the first and second law of thermodynamics, wave motion, vibrating systems; acoustical phenomena; the nature and propagation of light; reflection and refraction at a single surface, lenses and lens aberration; optical instruments; illumination, color, and polarized light. 3 class hours and 3 lab hours per week. **Prerequisite:** PI5623 and MA5692.

PI5651 ENGINEERING PHYSICS III

A 1-semester course; 4 credit hours. Principles of electricity and magnetism, Coulomb's Law, potential, D.C. Circuits, the magnetic field of a current and of a moving charge, induced electromotive force, capacitance and inductance, magnetic properties of matter. 3 class hours and 3 lab hours per week. **Prerequisite:** PI5623, PI5624 and MA5693 (MA5693 may be taken concurrently).

PI6511 RADIOLOGIC SCIENCE

A 1-semester course; 3 credit hours. Designed to examine the fundamentals of physical principles of electrical and x-ray physics and the operational study of x-ray equipment and auxiliary devices. The course will examine fundamental and derived units, mechanics, matter, magnetism and electricity, electromagnetism, generators, motors and transformers. 3 class hours per week.

Prerequisite: Enrollment in Radiologic Technology program or permission of instructor.

PI6512 RADIOLOGIC SCIENCE II

A 1-semester course; 3 credit hours. Emphasis will be placed on the formation of ionizing radiation by further analysis of x-ray and other types of circuits, tubes, etc., laws of motion, thermal considerations, optics and lens systems and radioactivity. 3 class hours per week. **Prerequisite:** Enrollment in Radiologic Technology Program or permission of the instructor.

PSYCHOLOGY

PS1101 INTRODUCTION TO PSYCHOLOGY

A 1-semester course; 3 credit hours. A survey course covering major topics and theorists in the field. The social, emotional, motivational, sensory and cognitive realms of behavior will be studied with a primary emphasis on normal developmental trends and patterns. Theorists considered may include Maslow, Freud, Piaget, Erikson and Skinner among others. 3 class hours per week.

PS1105 FOUNDATIONS OF EARLY CHILDHOOD

A 1-semester course; 3 credit hours. This is a basic introductory course designed for those currently working with young children. The process of child growth and development from the prenatal period through early childhood and the societal context in which it occurs. The practical application of developmental theories will be emphasized as will the uniqueness of rates and patterns of growth with implications for guidance of children at home, school, and in other peer-group contexts. May not be offered every semester. 3 class hours per week. This course meets the Office for Children Category A: Child Growth and Development.

PS1151 CHILD PSYCHOLOGY

A 1-semester course; 3 credit hours. Development from conception through middle childhood will be explored. An overview of cognitive, linguistic, perceptual, motor, social and personality development will be presented with emphasis on the preschool years. Major developmental theories will be used to explore the contribution of environment, heredity and social factors to the developing child. Strategies for meeting the developmental needs of children will be included. May not be offered every semester. 3 class hours per week. This course meets the Office for Children Category A: Child Growth and Development. **Prerequisite:** Introduction to Psychology or permission of the instructor.

PS1152 ADOLESCENT PSYCHOLOGY

A 1-semester course; 3 credit hours. A study of adolescent development from the point of view of both the adolescent and the adult. Basic theories of development will be examined with an emphasis on social, emotional, physical and cognitive domains. Communication and problem solving techniques appropriate to this stage will be considered in general and with reference to specific potential conflicts. May not be offered every semester. 3 class hours per week.

PS1154 PSYCHOLOGY OF PERSONALITY

A 1-semester course; 3 credit hours. This course introduces students to a variety of theoretical approaches to the understanding of character and personality. It includes psychoanalytic, learning, humanistic, transpersonal and existential theories. May not be offered every semester. 3 class hours per week.

PS1205 HUMAN GROWTH & DEVELOPMENT THROUGH ADOLESCENCE

A 1-semester course; three credit hours. Designed to help students understand behavior from conception to adolescence. Specific problems which occur during the life cycle will be discussed and explored. Patterns and sequences of growth and individual differences are reviewed in relation to the effects of heredity and environmental factors. Students may not receive credit for both PS1205 Human Growth & Development Through Adolescence and PS1210 Developmental Psychology I: Childhood & Adolescence. 3 class hours per week.

PS1210 DEVELOPMENTAL PSYCHOLOGY I: CHILDHOOD & ADOLESCENCE

A 1-semester course; three credit hours. This course is designed to help students understand development from conception to adolescence. Patterns and sequences of physical, cognitive, social and psychological development will be explored. Specific problems which occur during this part of the life cycle will be discussed as well as the role that heredity, environment and social factors play in creating human differences. 3 class hours per week. **Prerequisite:** Introduction to Psychology.

PS1211 DEVELOPMENTAL PSYCHOLOGY II: ADULTHOOD & AGING

A 1-semester course; three credit hours. This course will examine physical, cognitive, emotional, social and personality development from young adulthood to old age. Its focus will include the interaction of biological, psychological and socio-cultural factors and their effect on growth and development during the adult years and later life. Also, adjustment processes from varying perspectives, and socio-cultural attitudes affecting successful aging, will be examined. 3 class hours per week. **Prerequisite:** Introduction to Psychology.

PS1351 SOCIAL PSYCHOLOGY

A 1-semester course; 3 credit hours. A discussion of the fact that human nature is social and the implications of that fact; principally the effect of others upon one's mind and self imagery, and the complex social coordination that it allows. Special attention to individuation, the social validation of meaning and perception, symbols and symbolic interaction. May not be offered every semester. 3 class hours per week. **Prerequisite:** Introduction to Psychology or Introduction to Sociology.

PS1354 HUMAN RELATIONS

A 1-semester course; 3 credit hours. A group experience providing students with an opportunity to study and experience interpersonal relationships in a small group in which the focus is on interpersonal communication. Limit 20 students. May not be offered every semester. 3 class hours per week.

PS1651 ORGANIZATIONAL BEHAVIOR

A 1-semester course; 3 credit hours. An introductory course in the patterns and principles of human behavior in organizations. These will include such areas as organizational structure, motivation, decision making, managerial style, conflict and communication. A variety of organizational settings will be explored. May not be offered every semester. 3 class hours per week.

PS1751 ABNORMAL PSYCHOLOGY

A 1-semester course; 3 credit hours. The study of the classification, etiology, treatment and prevention of behavioral and emotional disorders. Includes the study of stress disorders, anxiety disorders, personality disorders and psychoses. 3 class hours per week.

Prerequisite: Introduction to Psychology or permission of the instructor.

PS2112 PROBLEMS OF EARLY CHILDHOOD

A 1-semester course; 3 credit hours. A sociological-psychological study of factors leading to educational success for the young child defined as having special needs because of intellectual, cultural, social and emotional factors. Federal and State legislation dealing with the education of special needs children will be introduced. This course includes the role of the family and cultural background as they relate to educational success. A theoretical framework of crisis and loss will be presented. May not be offered every semester. 3 class hours per week. **Prerequisite:** Introduction to Psychology or permission of the instructor.

RADIOLOGIC TECHNOLOGY

RTA101 RADIOLOGIC PROCEDURES & EXPOSURE I

A 1-semester course; 4 credit hours. This course will survey the profession and history of Radiologic Technology, patient care, ethical and legal issues and introduction to the clinical environment. Radiographic anatomy, medical terms and radiographic positioning of body parts will be introduced as well as concepts related to radiographic exposure and image production. 4 class hours. Students are also required to work in a supervised lab for an additional 2 hours per week. **Prerequisites:** Enrollment in the Radiologic Technology Program, CPR certification and compliance with health requirements.

RTA102 RADIOLOGIC PROCEDURES & EXPOSURE II

A 1-semester course; 4 credit hours. This course will continue basic positioning and film evaluation of radiographic anatomy. Radiographic exposure and the interrelated principles in producing quality radiographs will be discussed. Emphasis will be placed on the role of the Radiographer and skills needed in the clinical setting. 4 class hours. Students are also required to work in a supervised lab for an additional 2 hours per week. **Prerequisites:** RTA191 Clinical Practicum I and RTA101 Radiologic Procedures & Exposure I.

RTA191 CLINICAL PRACTICUM I

A 1-semester course; 2 credit hours. The student will apply principles learned in the classroom under direct supervision at the clinical site. Student assignments will be under the direction of the college clinical coordinator and the liaison instructor. Students are required to perform supervised clinical activity and laboratory demonstration for a total of 16 hours per week and 80 hours during the semester break. **Corequisite:** RTA101 Radiologic Procedures and Exposure I. **Prerequisites:** Enrollment in the Radiologic Technology Program, CPR certification and compliance with health requirements. CORI (Criminal Offender Record Information) and/or SORI (Sex Offender Record Information) checks are required prior to participation in this course.

RTA192 CLINICAL PRACTICUM II

A 1-semester course; 2 credit hours. The student will apply principles learned in the classroom under direct supervision at the clinical site. Student assignments will be under the direction of the college clinical coordinator and the liaison instructor. Students are required to perform supervised clinical activity and laboratory demonstration for a total of 16 hours per week. **Corequisites:** RTA102 Radiologic Procedures & Exposure II **Prerequisites:** RTA191 Clinical Practicum I and RTA101 Radiologic Procedures & Exposure I. **CORI** (Criminal Offender Record Information) and/or **SORI** (Sex Offender Record Information) checks are required prior to participation in this course.

RTA201 RADIOLOGIC EQUIPMENT & QUALITY ASSURANCE

A 1-semester course; 3 credit hours. This course will introduce the student to various imaging techniques and equipment. The student will also be introduced to the evaluation of radiographic equipment to assure consistency in the production of quality images. Tests and procedures used in evaluating radiographic equipment will be demonstrated using the appropriate equipment in the x-ray lab. 3 class hours per week. **Corequisites:** RTA294 Clinical Practicum IV and RTA202 Advanced Radiographic Imaging **Prerequisite:** RTA293 Clinical Practicum III.

RTA202 ADVANCED RADIOGRAPHIC IMAGING

A 1-semester course; 3 credit hours. This course will introduce the student to alternate methods of Imaging for trauma and disease as related to radiologic procedures. 3 class hours per week. Students are also required to work in a supervised lab for an additional 1 hour per week. **Corequisites:** RTA294 Clinical Practicum IV and RTA201 Radiologic Equipment and Quality Assurance. **Prerequisite:** RTA293 Clinical Practicum III.

RTA203 RADIobiology & PROTECTION

A 1-semester course; 3 credit hours. The student will study radiation quantities and units of measurement, maximum permissible dose requirements, the biological effects of radiation, genetic and somatic effects and principles and methods of radiation protection. 3 class hours per week. **Corequisites:** RTA295 Clinical Practicum V, RTA205 Computer Imaging & Cross Sectional Anatomy, RTA204 Special Radiographic & Angiographic Procedures **Prerequisites:** RTA294 Clinical Practicum IV, RTA201 Radiologic Equipment & Quality Assurance, and RTA202 Advanced Radiographic Imaging.

RTA204 SPECIAL RADIOGRAPHIC PROCEDURES & ANGIOGRAPHIC PROCEDURES

A 1-semester course; 3 credit hours. This course will introduce the student to special diagnostic radiographic and angiographic procedures. Special equipment involved in each procedure will be discussed. 3 class hours per week. **Corequisites:** RTA295 Clinical Practicum V, RTA203 Radiobiology & Protection and RTA205 Computer Imaging & Cross Sectional Anatomy **Prerequisites:** RTA201 Radiologic Equipment & Quality Assurance, RTA 202 Advanced Radiographic Imaging and RTA294 Clinical Practicum IV.

RTA205 COMPUTER IMAGING & CROSS SECTIONAL ANATOMY

A 1-semester course; 3 credit hours. This course will introduce the student to fundamental principles of computer technology, and its role in medical Imaging. Computerized tomography and MRI will be discussed. Equipment and its application will be investigated. Basic cross sectional anatomy of the brain, thorax, abdomen, pelvis, spine and extremities will be reviewed. 3 class hours per week. **Corequisites:** RTA295 Clinical Practicum V, RTA203 Radiobiology & Protection and RT204 Special Radiographic & Angiographic Procedures **Prerequisites:** RTA201 Radiologic Equipment & Quality Assurance, RTA202 Advanced Radiographic Imaging and RTA294 Clinical Practicum IV.

RTA293 CLINICAL PRACTICUM III

A 12-week Summer course; 5 credit hours. Students will be introduced to special diagnostic exams, pediatric and trauma radiography as well as mobile radiography and its role in imaging in the operating room. Students will attend lectures and apply their knowledge and skills at the clinical site. The student will perform new exams in special areas and gain experience and reinforcement of examinations previously learned. Students are required to perform supervised clinical activity for approximately 40 hours per week. **Prerequisites:** RTA192 Clinical Practicum II and RTA102 Radiologic Procedures & Exposure II. **CORI** (Criminal Offender Record Information) and/or **SORI** (Sex Offender Record Information) checks are required prior to participation in this course.

RTA294 CLINICAL PRACTICUM IV

A 1-semester course; 3 credit hours. The student will apply principles learned in the classroom under direct supervision at the clinical site. Student assignments will be under the direction of the college clinical coordinator and the liaison instructor. Students are required to perform supervised clinical activity and laboratory demonstration for a total of 24 hours per week. **Corequisites:** RTA201 Radiologic Equipment and Quality Assurance and RTA202 Advanced Radiographic Imaging. **Prerequisite:** RTA293 Clinical Practicum III. **CORI** (Criminal Offender Record Information) and/or **SORI** (Sex Offender Record Information) checks are required prior to participation in this course.

RTA295 CLINICAL PRACTICUM V

A 1-semester course; 3 credit hours. The student will apply principles learned in the classroom under direct and indirect supervision at the clinical site. Clinical application of skills in performing diagnostic procedures are assessed and evaluated for competency. Students are additionally given the opportunity to explore a variety of imaging modalities. Student assignments will be under the direction of the college clinical coordinator and the liaison instructor at the clinical site. Students are required to perform supervised clinical activity and laboratory demonstration for a total of 24 hours per week. **Corequisites:** RTA203 Radiobiology & Protection, RTA204 Special Radiographic & Angiographic Procedures and RTA205 Computer Imaging & Cross Sectional Anatomy **Prerequisites:** RTA201 Radiologic Equipment & Quality Assurance and RTA202 Advanced Radiographic Imaging, RTA294 Clinical Practicum IV. **CORI** (Criminal Offender Record Information) and/or **SORI** (Sex Offender Record Information) checks are required prior to participation in this course.

RELIGION

RE1101 WORLD RELIGIONS

A 1-semester course; 3 credit hours. A comparative study of the major religions of the world, including Hinduism, Buddhism, Taoism, Confucianism, Sikhism, Judaism, Christianity and Islam. 3 class hours per week.

RESPIRATORY CARE

RS6614 INTRODUCTION TO RESPIRATORY CARE

A 1-semester course; 7 credit hours. This course provides an introduction and orientation to the field of respiratory care. Major topics include cardiopulmonary anatomy and physiology, medical gas and oxygen therapy; humidity and aerosol therapy; basic patient assessment; an introduction to blood gases and acid-base balance; chest physiotherapy; and finally sterilization and infection control. Physician input will be provided through supplementary lectures from the program's medical director. The lab component covers equipment and procedural skills related to lecture material. Respiratory Practicum I is a co-requisite and parallels this course giving the student clinical experience and an opportunity for the application of theoretical principles and content material presented in this course. 6 class hours, 2 lab hours per week. **Corequisite:** RS6615 Respiratory Practicum I.

RS6615 RESPIRATORY PRACTICUM I

A 1-semester course; 2 credit hours. This practicum in a parallel fashion, utilizes knowledge and skills presented in RS6614 lecture and lab, and applies them to the clinical setting. This practicum includes an orientation to the hospital and an introduction to basic respiratory therapy procedures. Also included are CPR instruction, certification and an initial preclinical orientation period. Presented at one of the program's clinical affiliates, this practicum is administered jointly by a clinical instructor and the program's clinical coordinator. 8 clinical practicum hours a week. **Corequisite:** RS6614 Introduction to Respiratory Care.

RS6624 RESPIRATORY PROCEDURES & ASSESSMENT

A 1-semester course; 7 credit hours. This course presents sections in cardiopulmonary pathophysiology, pulmonary disease, basic pulmonary function testing, clinical application of blood gas analysis, and an introduction to positive pressure breathing, IPPB, mechanical ventilators and emergency respiratory care. Physician input will be provided through supplementary lectures from the program's medical director. The lab component covers equipment and procedural skills related to lecture materials. Respiratory Practicum II is a co-requisite and parallels this course giving the student clinical experience and an opportunity for the application of theoretical principles and content material presented in this course. 6 class, 2 lab hours per week. **Corequisite:** RS6625 Respiratory Practicum II. **Prerequisite:** RS6614 and RS6615 with a grade of C or better

RS6625 RESPIRATORY PRACTICUM II

A 1-semester course; 4 credit hours. This practicum in a parallel fashion utilizes knowledge and skills presented in RS6624 lecture and lab and applies them to the clinical setting. This practicum continues to build on competencies acquired during the first semester. Emphasis is placed on the day to day therapeutic respiratory procedures. Presented at one of the program's clinical affiliates, this practicum is administered jointly by a clinical instructor and the program's clinical coordinator. 16 clinical practicum hours a week. **Corequisite:** RS6624 Respiratory Procedures and Assessment. **Prerequisite:** RS6614 and RS6615 with a grade of C or better.

RS6629 RESPIRATORY PHARMACOLOGY

A 1-semester course; 2 credit hours. This course will present the principles of general pharmacology and action of the major respiratory drugs. In addition, the anatomy and physiology of the autonomic nervous system and its role in drug action will be covered. Drugs will be studied as groups and individually for site and mechanism of action, contraindications and side effects, clinical uses and routes of administration. 2 class hours per week. **Prerequisites:** RS6614 and RS6615.

RS6644 VENTILATOR MANAGEMENT & PULMONARY FUNCTION TESTING

A 1-semester course; 7 credit hours. This course covers areas of airway and ventilator management, advanced pulmonary function testing, an introduction to neonatal and pediatric respiratory care, cardiopulmonary rehabilitation, and analysis and decision making skills. Physician input will be provided through supplementary lectures from the program's medical director. The lab component covers equipment and procedural skills related to lecture material. Respiratory Practicum III is a co-requisite and parallels this course giving the student clinical experience and an opportunity for the application of theoretical principles and content material presented in this course. 6 class hours, 2 lab hours per week. **Corequisite:** RS6645 Respiratory Practicum III. **Prerequisite:** RS6624 and RS6625 with a grade of C or better.

RS6645 RESPIRATORY PRACTICUM III

A 1-semester course; 4 credit hours. This practicum in a parallel fashion, utilizes knowledge and skills presented in RS6644 lecture and lab and applies them to the clinical setting. This practicum continues to build on competencies acquired during previous semesters. Emphasis is placed on airway care, ventilator management and a rotation through the pulmonary function lab. Presented at one of the program's hospital affiliates, this practicum is administered jointly by a clinical instructor and the program's clinical coordinator. 16 clinical practicum hours a week. **Corequisite:** RS6644 Ventilator Management & PFTS. **Prerequisite:** RS6624 and RS6625 with a grade of C or better.

RS6654 RESPIRATORY INTENSIVE CARE

A 1-semester course; 7 credit hours. This course will provide units on electrocardiography, critical care drugs, cardiopulmonary pathology, critical care, hemodynamic monitoring, trauma, neuromuscular disease, and cardiopulmonary rehab. Also included is a unit on neonatal respiratory intensive care. Students will have opportunity to take the self-assessment registry and clinical simulation exams. Physician input will be provided through supplementary lectures from the program's medical director. This course will be supplemented with a lab component that covers equipment and procedural skills related to lecture material. Respiratory Practicum IV parallels this course giving the student clinical experience and an opportunity for the application of theoretical principles and content material presented in this course. 6 class hours; 2 lab hours per week. **Corequisite:** RS6655 Respiratory Practicum IV. **Prerequisite:** RS6644 and RS6645 with a grade of C or better.

RS6655 RESPIRATORY PRACTICUM IV

A 1-semester course; 4 credit hours. This practicum, in a parallel fashion, utilizes theoretical knowledge presented in RS6654 lecture and applies it to the clinical setting. This practicum continues to build on competencies acquired during previous semesters. Emphasis is placed on respiratory intensive care. Speciality rotations are established through a neonatal/pediatric facility and a homecare agency. Presented at one of the program's clinical affiliates, this practicum is administered jointly by a clinical instructor and the program's clinical coordinator. 16 clinical practicum hours per week. **Corequisite:** RS6654 Respiratory Intensive Care. **Prerequisite:** RS6644 and RS6645 with a grade of C or better.

RS6659 RESPIRATORY CARE SEMINAR

A 1-semester course; 2 credit hours. This course integrates the psychology of patient care, death and dying, interpersonal relations, the principles of management, use of computers, and other subjects related to employment in the clinical environment. Since a seminar is defined as a group of advanced students studying under a professor, each doing research and sharing the results of that research with each other, this course relies heavily on student participation. 2 class hours per week. **Prerequisites:** RS6644 and RS6645.

SCIENCE

SC0000 RESEARCH TOPIC IN SCIENCE

An open-end investigatory course with credit varying from one to three credit hours. Designed for the advanced student who is interested in a career in the sciences. The student will work on a topic of his choice under the direction of one faculty member. Interested students should obtain a list of faculty members showing their areas of specific interest and then consult with the faculty member of his choice before registering for the course. Limited to one semester. This course does not fulfill the science requirement for graduation. **Prerequisite:** Permission of the instructor.

SC5503 INTEGRATED SCIENCE I

A 1-semester course; 3 credit hours. This course provides an introduction to the study of the structure and functioning of the human body. Related topics in chemistry, physics and disease are integrated with the appropriate body systems covered. An introduction to microbiology is also included. 3 class hours per week.

SC5504 INTEGRATED SCIENCE II

A 1-semester course; 3 credit hours. Continuation of SC5503 covering the body systems not studied in SC5503. Related topics in chemistry, physics and disease are integrated where appropriate. 3 class hours per week.

SC5011 ENERGY, ENVIRONMENT & OUR FUTURE

A 1-semester course; 3 credit hours. Human population and associated energy demands have increased in the last century. This course examines the impact of this development from the points of view of food, technology and urbanization. The study of the progressive deterioration of human balance with the rest of nature shows the way psychological attitudes have to change. This course questions whether the prevailing attitudes and ever increasing energy demands and pollution can continue without destroying the delicate ecological balance that has taken so long to evolve. 3 class hours per week.

SC5511 PHYSICAL SCIENCE I

A 1-semester course; 4 credit hours. An integrated course which considers the basic principles of the physical universe, including the study of motion, energy, heat, temperature, electricity, light, and the composition of substances, in an effort to develop an understanding of the relationship of science to everyday life. 3 class hours and 1 two-hour laboratory period per week.

SC5512 PHYSICAL SCIENCE II

A 1-semester course; 4 credit hours. This is a continuation of Physical Science I. This course covers other interesting topics such as the Universe, the Solar System, the Earth, Rocks and Minerals, and the Atmosphere. 3 class hours and 1 two-hour laboratory period per week. **Prerequisite:** SC5511 Physical Science.

SIGN LANGUAGE INTERPRETER

IN1010 INTRODUCTION TO THE DEAF COMMUNITY

A 1-semester course; 3 credit hours. Introductory course examining various aspects of the deaf community. Addresses the value of American Sign Language and the culture it reflects, various professions within the deaf community, legislation impacting deaf people, an overview of educational approaches/controversies and linguistic variables within the deaf community, activities and current events relating to the deaf population, and lastly, the hearing mechanism, hearing disorders and audiological assessments and their ramifications within the deaf community. 3 class hours per week.

IN1030 INTRODUCTION TO THE INTERPRETING FIELD

A 1-semester course; 3 credit hours. Provides general information about the field of interpreting, stressing the importance of a professional attitude toward interpreting, especially as developed through observance of ethical standards. Additionally, rudimentary interpreting skills will be introduced through laboratory exercises. Understanding these aspects of interpreting is enhanced through participation in the course Introduction to Practicum. 2 class hours and 2 lab hours per week. **Prerequisite:** American Sign Language I with a grade of "C" or higher and permission of the coordinator.

IN1041 INTRODUCTION TO PRACTICUM

A 1-semester course; 2 credit hours. Emphasizes the important aspects of professional interpreting (e.g., physical factors, mode of communication employed, professional attitude and approach to assignment, etc.). The field experience will provide both the opportunity to observe the material discussed in the classroom and to participate in actual interpreting situations. 1 classroom seminar plus 4 field hours per week. **Prerequisite:** American Sign Language I with a grade of C or higher, simultaneous enrollment in American Sign Language II and Introduction to the Interpreting Field or with coordinator's approval.

IN2029 INTERPRETING

A 1-semester course; 4 credit hours. Designed to develop a broad base of competency and performance skills in transliterating and interpreting. Emphasis is on an in-depth study of the principles of interpreting and their incorporation into specific interpreting situations. 3 class hours and 3 lab hours per week. **Prerequisite:** Introduction to the Interpreting Field, American Sign Language II with a grade of C or better, and simultaneous enrollment in American Sign Language III or with coordinator's approval.

IN2033 ADVANCED INTERPRETING

A 1-semester course; 4 credit hours. Involves further emphasis on developing competency and skills in transliterating and interpreting. A variety of learning activities aimed at strengthening interpreting techniques are conducted. 3 class hours and 3 lab hours per week. **Prerequisite:** Introduction to the Interpreting Field, Interpreting, and American Sign Language III with a grade of C or better.

IN2039 PRACTICUM I

A 1-semester course; 3 credit hours. Emphasizes the means for successful performance in professional interpreting situations. Field experience allows students to put theory into practice by providing opportunities for participation in various interpreting settings. 1 class hour plus 8 field hours per week. **Prerequisite:** Introduction to Practicum with a grade of C, simultaneous enrollment in Interpreting and American Sign Language III and coordinator's approval.

IN2041 PRACTICUM II

A 1-semester course; 3 credit hours. Provides advanced students with the opportunity to function in actual interpreting situations with professional advice and support. This supervised work experience is to be the final phase of preparation prior to entry into the field of professional interpreting. 1 class hour plus 8 field hours per week. **Prerequisites:** Practicum I, American Sign Language III and Interpreting with a grade of C or higher, simultaneous enrollment in Advanced Interpreting and coordinator's approval.

SOCIOLOGY

SO1001 MULTICULTURAL PERSPECTIVES IN HEALTH CARE I

A 1-semester course; 3 credit hours. This course focuses on the impact of culture in shaping the American and selected target populations perspectives on health care. Attitudes, beliefs, and values held by the healthcare provider and healthcare receiver will be investigated, particularly as they relate to the effectiveness of the medical interpreter's role. 3 class hours per week. Enrollment restricted to students in Health Programs.

SO2001 MULTICULTURAL PERSPECTIVES IN HEALTH CARE II

A 1-semester course; 3 credit hours. This course focuses on the effective application of concepts associated with both culture and Health care system. Students will demonstrate the skills of cultural awareness in the delivery of culturally sensitive care. 3 class hours per week. Enrollment restricted to students in Health Programs.

SO3321 INTRODUCTION TO SOCIOLOGY

A 1-semester course; 3 credit hours. This course provides the student with an understanding of the theories, methods and approaches to the study of human social interactions. It emphasizes the founding and evolution of sociological thought and the influences of social institutions and cultural factors on human behavior. Among subjects covered are: culture, groups, socialization, deviance and social inequalities. 3 class hours per week.

SO3324 CULTURAL ANTHROPOLOGY

A 1-semester course; 3 credit hours. An introduction to the diversity of contemporary human cultures. A cross-cultural perspective will be used to examine the subsistence patterns, marriage, kinship, political organization, religion and philosophy of selected non-European peoples. Theoretical frameworks to be considered will include evolutionary, cultural materialist, functionalist, personality and culture. 3 class hours per week.

SO3325 NORTH AMERICAN INDIANS

A 1-semester course; 3 credit hours. Survey of Native American cultures north of the Mexican border. Prehistory will be briefly examined, but major emphasis will be on culture areas and cultural concepts: the economic, religious, family, political, and educational aspects of selected groups are explored. Adaptational patterns including the modern era will also be examined. 3 class hours per week. **Prerequisites:** SO3321 Introduction to Sociology or SO3324 Cultural Anthropology.

SO3331 MARRIAGE AND THE FAMILY

A 1-semester course; 3 credit hours. The main focus of this course is the understanding of the relationship between family forms and social structure. This will involve an investigation of human sexuality, interpersonal communication, relationships, marriage, divorce, and alternative forms of family living. 3 class hours per week.

SO3333 CONTEMPORARY SOCIAL PROBLEMS

A 1-semester course; 3 credit hours. An analysis of the relationship between social structure and social problems in contemporary society. The course will emphasize: 1) the interdependence of all social problems; 2) the interaction between our institutional forms and social problems; and 3) the relationship between values and social action. May not be offered every semester. 3 class hours per week.

SO3343 JUVENILE DELINQUENCY

A 1-semester course; 3 credit hours. This course will concern itself with an in-depth study of juvenile delinquency; its various causes, the sociological impact on the community, as well as present rehabilitative efforts which attempt to cope with this serious contemporary problem. May not be offered every semester. 3 class hours per week. **Prerequisite:** SO3321 or permission of the instructor.

SO3353 INTRODUCTION TO CRIMINOLOGY

A 1-semester course; 3 credit hours. A survey of the patterns and evolution of adult criminal behavior and juvenile delinquency analyzed in terms of various theories of such behavior; types of crime, and the administration of criminal justice. May not be offered every semester. 3 class hours per week.

SO3354 DEATH & DYING

A 1-semester course; 3 credit hours. America is a death denying society. The hidden aspect of this universal experience has caused untold misery. Openness, honesty, sharing and personal consciousness-raising will enable people to lead richer, happier, more productive lives. Health worker, minister, teachers, police, parents, among others, can benefit from this course. Topics covered include medical definition, historic aspects, children and death, suicide, grief, rituals, and personal acceptance of death. May not be offered every semester. 3 class hours per week.

SO3355 INTRODUCTION TO SOCIAL WELFARE

A 1-semester course; 3 credit hours. An introduction to social work and human service systems in America. An overview of historical and present characteristics and clinical issues in organizations such as family and child welfare agencies, youth and correctional agencies, child care centers, mental health institutions, and other agencies and services concerned with casework, group work and community organization work. Emphasis will be placed on knowledge of agencies and services, as well as worker's role and function in meeting the needs of the client population. 3 class hours per week.

SO3358 WOMEN & SOCIETY

A 1-semester course; 3 credit hours. An analysis of the effect of social structure on the position of women in society. Historical, cross-cultural and biological perspectives will be used to explore attitudes toward women and their economic and political positions. Women's issues will be viewed as they parallel general human issues. The course will encourage discussion of the possible effects of women's equality on the social structure of the future. May not be offered every semester. 3 class hours per week.

SO3360 RACE & ETHNIC RELATIONS

A 1-semester course; 3 credit hours. This course is designed to provide students with a sociological perspective of Race and Ethnic Relations. Sociological concepts such as racism, prejudice, ethnicity, culture, etc. will be defined and explained. A variety of ethnic group experiences will be studied in order to look at their rich and vast contributions to U.S. society. The positive contributions of cultural diversity will also be a major focus of the course. May not be offered every semester. 3 class hours per week.

SO3361 INTRODUCTION TO DEAF CULTURE

A 1-semester course; 3 credit hours. This course examines Deaf Culture from a multidisciplinary perspective. The historical treatment of deaf people will be explored along with the sociological and cultural factors that contributed to the depathologizing of deaf individuals and the emergence of Deaf Culture. This will include a discussion of education of the deaf, minority group dynamics, deaf community as a linguistic and cultural minority, and the importance of Deaf Culture (its language, values, traditions and diversity of membership.) and its interaction with the hearing community. 3 class hours per week. **Prerequisite:** SO3321 Introduction to Sociology or permission of the instructor. IN1010 Introduction to the Deaf Community is strongly recommended.

SPANISH

EN0217 SPANISH/ENGLISH TRANSLATION

A 1-semester course; 4 credit hours. Written translation between Spanish and English (emphasis given from Spanish to English). Clarification of vocabulary and structures through contrastive translations. Material will come from current publications, textbooks, reference grammars, and dictionaries. Strongly recommended for all ESL students and former ESL students whose language is Spanish. Others may enroll with permission of the instructor. 2 class hours, 4 lab hours per week. **Prerequisite:** EN0214 ESL Core English IV for students whose native language is Spanish.

SP4401/SP4402 INTRODUCTORY SPANISH I & II

A 2-semester course; 3 credit hours per semester. For students who have not completed two years of high school Spanish or the equivalent as determined by the department. Audio-lingual emphasis. Introduction to grammatical patterns, reading and writing. 3 class hours per week.

SP4421 CONVERSATIONAL SPANISH I

A 1-semester course; 3 credit hours. Designed primarily for personnel in public service who need basic communication skills when dealing with speakers of Spanish only. Question/answer format; basic dialogue, pattern practices, specialized vocabularies to meet individual needs. Not open to students who have completed SP4401 or to native/near native speakers. (Students should check with the Foreign Language Department Chairperson about transfer status.) 3 class hours per week.

SP4422 CONVERSATIONAL SPANISH II

A 1-semester course; 3 credit hours. A continuation of the vocabulary development of Conversational Spanish I with grammatical explanations as appropriate. Question/answer format; basic dialogue, pattern practices, specialized vocabularies to meet individual needs. In addition, cultural readings are introduced. 3 class hours per week. **Prerequisite:** SP4421 or equivalent.

SP4423 CONVERSATIONAL SPANISH III

A 1-semester course; 3 credit hours. This course is open to students who have completed a college-level introductory Spanish course. Question/answer format; dialogues, specialized vocabularies to meet specific needs, specialized writing skills introduced. Conducted in Spanish. 3 class hours per week. **Prerequisite:** SP4422 or equivalent.

SP4424 CONVERSATIONAL SPANISH IV

A 1-semester course; 3 credit hours. Question/answer format; specialized writing skills, specialized vocabularies to meet specific needs. Conducted in Spanish. 3 class hours per week. **Prerequisite:** SP4423 or equivalent.

SP4451/SP4452 INTERMEDIATE SPANISH I & II

A 2-semester course; 3 credit hours per semester. For students who have completed two or more years of high school Spanish or the equivalent as determined by the department, or who have completed SP4401 and SP4402. A continued study of language skills, emphasizing the development of reading ability. 3 class hours per week.

SP4461/SP4462 REVIEW & PROGRESS IN SPANISH I & II

A 2-semester course; 3 credit hours per semester. A review of basic structure, verbs, and related essentials. Intended for native speakers, Hispanic students, majors and non-majors. Strengthens skills in speaking, reading, and writing. Vocabulary and pronunciation improvement; short compositions. Reading and discussion of selected short stories, poetry and folklore. Course tailored to meet individual needs. 3 class hours per week. **Prerequisite:** SP4401 and SP4402 or permission of the instructor.

THEATRE

NOTE: Courses not offered during a particular semester may also be taken for directed study with permission of instructor.

TH7760 STAGECRAFT

A 1-semester course; 3 credit hours; offered only as a directed study. Stagecraft is a hands-on course in which students will work on projects in set design, research and construction, painting and dressing; costume design, research, construction; lighting design, color, curing and operation; property design, research and construction; sound design, research, taping and operation; and/or stage management. The projects may be determined by the productions of the Top Notch Players and/or Dance Club. 2 class hours and 2 lab hours per week.

TH7765 INTRODUCTION TO THEATER

A 1-semester course; 3 credit hours. This course has two general goals. First, to introduce the contemporary theatrical world: playwright, producer, theater structure, director, actor, technicians and designers. Second, to apply knowledge in a practical experience situation. 2 class hours and 2 lab hours per week.

TH7768 SCENE STUDY

A 1-semester course; 3 credit hours. This is a performance class offering in-depth scene and monologue study emphasizing character development and script analysis. Various acting techniques will be discussed and utilized. Course objectives will center on the ability of the students to overcome fears and barriers, the development of confidence in public, and the ability to make creative choices. 2 class hours and 2 lab hours per week.

TH7769 ACTING

A 1-semester course; 3 credit hours. Acting is a performance based class in which students will work on exercises, scenes and monologues in order to better understand the vocal, physical and psychological techniques. Students will be required to memorize lines and movement, work with other students, participate in class work, take risks, write about the acting process and about performances outside of class. 2 class hours and 2 lab hours per week.

TH7775 DIRECTING

A 1-semester course; 3 credit hours; offered only as a Directed Study. Students in the class will direct a one-act play which will be performed before a live audience. Each director will be responsible for selecting a script (with approval of the instructor), research, analysis, blocking, casting and rehearsing it. Each director will complete a director's book, attend production meetings, respond to criticism and work with the instructor. 2 class hours and 2 lab hours per week.

TH7795 HISTORY OF THEATER

A 1-semester course; 3 credit hours. This course studies history of Western theater from Greek to modern times. The focus of this course is on theater architecture, production methods, acting styles and dramatic writing style in each period discussed. 3 class hours per week.

TH7799 REHEARSAL & PERFORMANCE

A 1-semester course; 3 credit hours; offered only as a directed study. Students who have been cast in a Top Notch players' major production or who want to work on the production are eligible. Student actors will be required to memorize lines and movement, analyze their characters, keep a journal about the process, perform the play in front of a live audience and respond to critiques. Student technicians will work on set construction, painting and decoration; lighting; costume design and construction; sound effects and/or publicity. 3 class hours per week. **Prerequisite:** Audition and written permission of instructor.

TRAVEL & TOURISM

TL1001 INTRODUCTION TO THE TRAVEL & TOURISM INDUSTRY

A 1-semester course; 3 credit hours. This course is designed as an introduction to travel agency operations, policies and procedures. Emphasis will be placed on domestic and international air travel; cruising; railroads, car rentals and charters; hotels; tours and itineraries. Also covered are selling the travel product to the individual, travel agencies and marketing, automation, and travel agency finances. 3 class hours per week

TL1010 RESERVATION & TICKETING I

A 1-semester course; 3 credit hours. In this course, students will have the opportunity to develop hands on reservation and ticketing skills on computer terminals. Topics covered include building and Passenger Name Record (PNR); PNR modifications; fare quotes and itinerary pricing; automated airline ticket, boarding pass and invoice preparation; auxiliary reservation services such as car rentals, hotels and cruises; queue system; and client and corporate profiles. 2 class hours and 2 lab hours per week.

TL1015 INTERNATIONAL & DOMESTIC DESTINATIONS

A 1-semester course; 3 credit hours. The continent of North America is studied in depth. Students will develop a sound knowledge of vacation and industrial cities throughout North America. They will also become familiar with important tourist destinations. The climate, culture, modes of transportation and places of interest are emphasized. World geography as it pertains to travel and tourism is studied on the basis of the various continents and how they relate to international travel. 3 class hours per week.

TL1020 RESERVATION & TICKETING II

A 1-semester course; 3 credit hours. This course will cover the more advanced functions of the SABRE reservation system. Topics include itinerary modification, dividing a PNR, queues, direct reference system, auxiliary segments, and STARS. Students complete their lab requirements at a travel agency. 2 class hours and 4 lab hours per week. **Prerequisite:** TL1010 Reservation and Ticketing I

College Policies

Affirmative Action, Nondiscrimination and Accessibility

Northern Essex Community College complies with the requirements of Title IX of the Higher Education Act of 1972 and with the Viet Nam Era Readjustment Assistance Act of 1974. Recruitment, admission, programs, activities and facilities are available to all on a non-discriminatory basis, without regard to race, creed, religion, color, gender, sexual orientation, age, disability, veteran status, marital status and national origin. The college is an equal opportunity/affirmative action employer. Northern Essex is physically accessible to all people, including those who use wheelchairs. All programs and activities are accessible to all otherwise-qualified individuals who have disabilities. The college complies with the requirements and spirit of Section 504 of the Rehabilitation Act, as amended, and the Americans with Disabilities Act, as amended.

Inquiries regarding affirmative action, equal opportunity and accessibility concerns should be addressed to the Affirmative Action/Equal Opportunity Officer, the Section 504 Compliance Officer, and/or the Americans with Disabilities Act Coordinator, Northern Essex Community College, 100 Elliott Street, Haverhill, MA 01830.

Alcohol Policy

It is the policy of the board of Trustees of Northern Essex Community College that no persons shall give, sell, deliver, or have in their possession any alcoholic beverage in any building owned or operated by the College, or on any premise used for college activity and under the control of the Board of Trustees of Northern Essex Community College. Alcoholic beverages are not permitted at any College event off campus that is intended for students.

Assembly Policy

Northern Essex Community College wholeheartedly encourages informal student gatherings to provide a welcoming community climate on campus. To establish orderly and safe spaces for all students and to facilitate easy and natural movement of students, faculty, staff and visitors through the halls and into the campus buildings, the college needs to designate appropriate places and times for small informal student gatherings. Generally, Monday through Friday, the following places may be used without formal scheduling:

- Jitters Care in the Spurk Building,
- Recreation areas in the Sport & Fitness Center,
- Lounge and Cafeteria in the Student Center, and
- Exterior patio between the classroom buildings.

Personal music and conversation of one group should be contained at a level that doesn't disturb the neighboring group(s) or the business of the college.

Anytime that classes are in session the college requests that all members of its community and its visitors respect the need for sufficient quiet outside the classrooms and offices. Please restrict the size, noise and level of activity of informal group gatherings during any hours that classes are scheduled on campus to the above mentioned locations.

Campus Security Act

On November 8, 1990, Congress enacted the Crime Awareness and Campus Security Act of 1990 under Public Law 101-542, Title II. This act requires that institutions of higher education receiving federal funding collect information with respect to crime statistics and campus security policies and, beginning September 1992, prepare, publish, and distribute an annual security report.

Northern Essex Community College, in accordance with legal mandates and its philosophy of establishing and maintaining an environment of learning and a supportive climate in which to conduct the business and mission of the college, provides this information to the college community through the Vice President of Administration's Office on the Haverhill Campus.

Consensual Relationships Policy

Under this policy of the Community College, consenting romantic and sexual relationships between faculty and student, librarian and student, administrator and student, classified staff member and student, or supervisor and employee are deemed unprofessional. Because such relationships interfere with or impair required professional responsibilities and relationships, they are looked upon with disfavor and are strongly discouraged.

Criminal Offender Record Information & Sex Offender Registry Information Checks

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or includes a clinical affiliation with a private or public health care provider, may be required to undergo a Criminal Offender Record Information (CORI) check and/or a Sex Offender Registry Information (SORI) check. Depending on the contents of a student's CORI or SORI reports, participation in an academic program, or clinical affiliation related thereto, may be denied. CORI checks may be performed pursuant to Mass. General Laws, Chapter 6, Sections 167-178B, and consistent with guidelines promulgated by the Executive Office for Health and Human Services, and/or the Commonwealth's Department of Public Health. SORI checks may be performed pursuant to Mass. General Laws, Chapter 6, Section 178C. For more information, contact the Registrar at 978-556-3700.

Firearms on Campus

It is the policy of Northern Essex Community College that no one is permitted to carry a firearm on the grounds or in a college building. The pertinent legislation, Chapter 269, section 10 of the Massachusetts General Laws states (in part) "(j) Whoever, not being a law enforcement officer, and notwithstanding any license obtained by him under the provisions of chapter one hundred and forty, carries on his person a firearm as hereinafter defined, loaded or unloaded or other dangerous weapon in any building or on the grounds of any elementary or secondary school, college or university without the written authorization of the board or officer in charge of such elementary or secondary school, college or university shall be punished by a fine of not more than one thousand dollars or by imprisonment for not more than one year, or both. For the purpose of this paragraph, "firearm" shall mean any pistol, revolver, rifle or smoothbore arm from which a shot, bullet or pellet can be discharged by whatever means.

Any officer in charge of an elementary or secondary school, college or university or any faculty member or administrative officer of an elementary or secondary, college or university failing to report violations of this paragraph shall be guilty of a misdemeanor and punished by a fine of not more than five hundred dollars."

Employees must report any suspected violation of this Policy/Law to the respective campus (Haverhill or Lawrence) Security Office, Superintendent of Buildings and Grounds or the college Vice President for Administration.

A law enforcement officer present as a student and wishing to carry a firearm shall obtain such written authorization. This form is available in the Office of Academic Affairs and in the Office of Enrollment Management and Student Services.

Hazing Policy

Massachusetts General Laws state that "..... Whoever is a principal organizer or participant in the crime of hazing (initiation into a student organization) shall be punished by a fine of not more than three thousand dollars or by imprisonment in a house of correction for not more than one year, or both. Whoever knows that another person is the victim of hazing and is at the scene of such crime shall report it as soon as reasonably practicable to an appropriate law enforcement official if it can be done without peril to one's self or others. Whoever fails to report such crime shall be punished by a fine of not more than one thousand dollars."

Northern Essex policy states that: "Any academic or administrative official of the college, any member of the faculty, or any student of the academic or administrative official of the college, any member of the faculty, or any student of the college may file charges against any student for misconduct. The charges shall be filed in writing to the Vice President of Enrollment Management and Student Services. In extraordinary circumstances as determined by the Vice President, she/he may suspend the student charged pending further consideration of the case"

College Immunization Law for Massachusetts

General Laws of the Commonwealth of Massachusetts require that all full-time college students (12 credits or more) and all students attending college while on a student visa, as well as all students in Health Sciences (regardless of year of birth) must present a medical certificate indicating they have received:

- A least one dose of mumps and rubella vaccines (s) given at 12 months of age or after
- Two doses of live measles vaccine given at least one month apart beginning at or after 12 months of age
- A booster does of Tetenus/Diphtheria (Td) within the last ten years

These are required in order to register for classes. In the case of measles, mumps or rubella, the student may present laboratory proof of immunity. High school immunization documents are acceptable, as well as physicians or clinic records.

To facilitate compliance with the Massachusetts College Immunization Law, the Student Health Services office provides immunizations to students on a fee-for-service basis and supplies information about Board of Health Offices and other agencies that offer immunizations. For assistance with this requirement, please contact the Student Health Services office at 978 556-3770 in Haverhill and at 978 738-7482 in Lawrence. See also Student Life Section, Student Health Services, page 23.

Privacy Act Information

The Family Educational Rights and Privacy Act of 1974, as amended, insures confidentiality of educational records and prescribes the conditions under which information about students can be released to the student, parents or guardians, and authorized third parties. In addition, the Act defines the general record keeping requirements that the institution must maintain to insure accuracy and access of student educational data. The general Provisions of the Act are basic to the following guidelines:

- Students have the right to inspect their academic record (transcript) and student file, and request corrections to data that they believe to be in error or challenge the contents of their student record. The student academic record and file includes all information as of the date of application.
- Students have the right to obtain copies of their academic records, must do so in writing, and may be charged for copies.
- Students' parent(s) or legal guardian(s) have the right to access and copies of their children's academic transcript and record only if the child is less than 18 years of age.
- The institution may refuse to provide transcripts for such reasons as nonpayment of financial obligation of debt owed the college, but students still retain the right to inspect their records.
- *Directory Information* is defined as the student's name, address and telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received and the most recent previous educational institution attended by the student.
- The institution may disclose academic and Directory Information to college administrators and faculty whom the college has determined to have legitimate educational interests.
- A student has the right to restrict release of Directory Information in whole or part to certain parties, and must submit a request in writing to the Registrar.

Additional information about this act, the specific policies of this institution, and students' rights may be obtained by contacting the Registrar's Office, Northern Essex Community College, 100 Elliott Street, Haverhill, MA 01830, telephone 978 556-3700.

Sexual Harassment Policy

Sexual harassment of a student, an employee or any other person in the College is unacceptable, impermissible and intolerable. Sexual harassment is a form of sex discrimination. It occurs in a variety of situations that share a common element: the inappropriate introduction of sexual activities or comments into the work or learning situation. Often, sexual harassment involves relationships of unequal power and contains elements of coercion as when compliance with requests for sexual favors become a criterion for granting work, study or grading benefits. However, sexual harassment may also involve relationships among equals, as when repeated sexual advances or demeaning verbal behaviors have a harmful effect on a person's ability to study or work in the academic setting.

For general purposes, sexual harassment may be described as unwelcome advances, requests for sexual favors, and other physical conduct and expressive behavior of a sexual nature when (1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or education; (2) submission to or rejection of such conduct by an individual is used as the basis for academic or employment decisions affecting that individual; or (3) such conduct has the purpose or effect of substantially interfering with an individual's academic or professional performance and creating an intimidating, hostile, or demeaning employment or educational environment.

Such behavior is expressly forbidden by federal and state regulations. The federal government has established that such behaviors are actionable under provisions of Title VII of the 1964 Civil Rights Act, as amended, and the provisions of Title IX of the 1972 Educational Amendments, as amended.

Inquiries regarding sexual harassment concerns should be addressed to the Affirmative Action/Equal Opportunity Officer, Northern Essex Community College, 100 Elliott Street, Haverhill, MA 01830.

Smoke-Free Environment Policy

Because of our collective concern for the environment, and because we are aware of the harmful effects of smoking on the smoker, and because now much is being written about the effects of second-hand smoke on the non-smoker, Northern Essex Community College is committed to providing a smoke-free environment for students, employees and visitors. All college buildings, in Haverhill and in Lawrence, shall be smoke-free.

For those who wish to smoke despite the effects to themselves or others, accommodations are available outdoors in the vicinity of each building.

A complete statement of the college's smoke-free policy is available in the Office of the Director of Student Health Services and in the Office of the Associate Dean for Human Resources.

Substance Abuse Policy

The college complies with all state and federal laws governing the possession, use and sale of alcohol, drugs and other illegal substances on campus and at all college-sponsored activities. In compliance with the *Drug-Free Schools and Communities Act of 1989*, the college annually distributes information and policy statements to each student and employee concerning standards of conduct, legal sanctions, health risks and programs related to its commitment to a drug-free study and work environment. Copies of this information and policy statement are available in the Personnel and Student Services offices.

Support of Diversity and Pluralism Policy

Students, faculty, staff and visitors must be free from conduct which has the purpose or effect of interfering with an individual's academic or professional performance or creating an intimidating, hostile or demeaning educational or employment environment. The College has a policy of unequivocal condemnation of intolerance, whether it be based on ethnicity, religion, cultural heritage, race, disability, sex or sexual orientation.

Student Rights and Responsibilities

Student Responsibilities and Rights are revised annually and published separately in the NECC Student Handbook. This section of the handbook contains detailed information on such items as; Student Rights, Student Responsibilities, Regulations Governing Student Conduct, Right of Grievance. A copy can be obtained by calling the Student Activities Office on the Haverhill campus at 978 556-3731.

Student Grievance Procedure and Due Process Procedures for Students

Information pertinent to the Student Grievance Procedure and Due Process Procedures for Students is also included in the NECC Student Handbook. These sections contain detailed information on such items as; Disciplinary Proceedings, Conduct of Hearing, Appeal Procedure, Possible Sanctions, Grade Appeals Reprisals and more.

Additional College Policy Information Contained in the NECC Student Handbook

Some additional College Policies, not included in this Catalog, can be found in the NECC Student Handbook. These policies include;

- Bulletin Boards Posting Policy
- Solicitation Policy
- Computer and Network Usage

A copy of the Student Handbook can be obtained by calling the Student Activities Office at 978 556-3731.

Summary of Campus Incidents

The following is a list of the number of campus incidents that took place for the Haverhill and Lawrence Campuses between 1/1/99 and 12/31/99.

The administration works very hard to create a safe environment for everyone at NECC. We remain committed to reducing the number of on campus incidents, and are constantly taking steps to improve security measures whenever possible.

| Incident: | A Totals | B Totals | C Totals |
|-------------------------|----------|----------|----------|
| Manslaughter | 0 | 0 | 0 |
| Murder | 0 | 0 | 0 |
| Arson | 0 | 0 | 0 |
| Sex Offenses | | | |
| Forcible | 0 | 0 | 0 |
| Non-forcible | 2 | 1 | 0 |
| Robbery | 0 | 0 | 0 |
| Aggravated Assault | 0 | 0 | 0 |
| Burglary | 13 | 0 | 0 |
| Motor Vehicle Thefts | 0 | 0 | 0 |
| Liquor-law violations | 0 | 0 | 0 |
| Drug-related violations | 0 | 0 | 0 |
| Weapons possessions | 0 | 0 | 0 |

A = On Campus

B = Non-Campus Property - Leased Institutional Space

C = Public Property - Adjacent Sidewalks, Streets, or Thoroughfares

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Haverhill Campus at Elliott Street

Located at exit 52 off route 495 at 100 Elliott Street in Haverhill. Major roadways connecting with route 495 are route 93 from the south and route 95 from the north. From Route 495 north, take exit 52 and turn left. The entrance to the campus is on the left, immediately after the on-ramp to 495 north. From Route 495 south, take exit 52 and turn right. The entrance to the campus is the next left.

Lawrence Campus at Franklin Street

Located at 45 Franklin Street in Lawrence. From Route 495 north or south, take exit 41 (Route 28) toward Lawrence. Follow Route 28 north for 2.4 miles. Turn right on Valley Street and continue straight ahead into the campus parking lot. From Route 93 north or south, take exit 46 (Route 110). Proceed on Route 110 (which becomes Haverhill Street) toward Lawrence. Turn right on Route 28 and take the fourth left onto Valley Street. Continue straight ahead into the campus parking lot.

Lawrence Campus at Amesbury Street

Located at 78-82 Amesbury St. in Lawrence. From Route 495 north or south, take Exit 41 (Route 28) toward Lawrence. Follow Route 28 north for 2.4 miles. Turn right on Lowell Street. Proceed to Amesbury Street (3 blocks), turn right on Amesbury Street. The first entrance on the right is the college parking lot. From Route 93 north or south, take Exit 46 (Route 110). Proceed on Route 110 (which becomes Haverhill Street) toward Lawrence. Cross Route 28 (Broadway), proceed to the 3rd traffic light. Turn right onto Amesbury Street. After the first set of lights, turn right. The college parking lot entrance will be the first turn on the right. Additional parking is available in the Buckley Garage across from the campus.

Andover Extension at the Greater Lawrence Technical School

is located at 57 River Road. From Route 93 north or south, take Exit 45 (River Road) toward Lawrence (Exit 45 is the first exit north of the Routes 93/495 interchange). The Technical School is one quarter mile on left.

Methuen Extension at Methuen High School

Located at Methuen High School, 1 Ranger Road. From Route 495 north or south, take Exit 47 (Route 213 west). Take Exit 3 off Route 213 (Pleasant/Howe Streets exit). Turn right on Howe Street. Continue straight through lights to Jackson Street. Entrance of the school is about one mile on right. Stay on entry road, pass front entrance and park in lot on left. Use faculty entrance. From Route 93 north or south, take Exit 48 to (Route 213 east). Take Exit 3 off Route 113 (Pleasant/Howe Streets exit). Turn left at first set of lights and right at second set of lights onto Jackson Street and proceed as above.

Newburyport Extension at Newburyport High School

Located at Newburyport High School, 241 High Street. From Route 495 north, take Exit 55 (Route 110 marked I-95 south Salisbury/Boston"). Take Route 110 about one mile to Route 95 south. Go south on Route 95 over the Merrimack River to next exit (Route 113 Newburyport). Turn left. The high school is about two miles on right. Parking is available at side of school (do not park in front circle).

Whittier Extension

Haverhill classes also meet at the Whittier Regional Vocational Technical School, Amesbury Line Road, Haverhill. From Route 495, take exit 52 on Route 110. Turn right on Amesbury Line Road at the Whittier sign and right again at school entrance.

Northern Essex Community College

Haverhill Campus

100 Elliott Street, Haverhill, MA 01830

978 556-3900

Lawrence Campus

45 Franklin Street, Lawrence, MA 01841

978 738-7000

Lawrence Campus at Amesbury Street

78-82 Amesbury Street, Lawrence, MA 01841

978 738-7600